COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

<table>
<tr><td>ESTABLISHMENT OF TDD DISTRIBUTION PROGRAM</td><td>)</td><td></td></tr>
<tr><td>FOR DEAF, HARD-OF-HEARING AND SPEECH-</td><td>)</td><td>ADMINISTRATIVE</td></tr>
<tr><td>IMPAIRED PERSONS IN KENTUCKY</td><td>)</td><td>CASE NO. 352</td></tr>
</table>

O R D E R

On March 15, 1994, the General Assembly of the Commonwealth of Kentucky passed House Bill 538 (codified in various sections of KRS Chapters 278 and 163) (hereinafter "the Act") which requires the establishment of a program to distribute telecommunications devices for the deaf ("TDDs") to deaf, hard-of-hearing, and speech-impaired persons to facilitate the use of the telecommunications relay service established pursuant to KRS 278.548. The Act provides that the Kentucky Commission on the Deaf and Hard-of-Hearing ("KCDHH") shall establish a program to distribute TDDs to any deaf, hard-of-hearing, or speech-impaired person qualified to receive the equipment. This proceeding is established for the purpose of complying with the Act. A copy of KCDHH's proposed "Plan for Implementation of H.B. 538" is attached as Appendix A.

The Act requires the Public Service Commission ("PSC") to determine the appropriate funding mechanism for the TDD distribution program and to conduct public hearings by January 1, 1995. By statute, the funding mechanism may not collect more than $200,000 annually from subscribers of telecommunications utilities. Such utilities may not be required to absorb the cost of funding

the TDD distribution program. The PSC is required to distribute the funds collected to KCDHH to implement and operate the TDD distribution program. The Act also requires the PSC to consider whether the funding mechanism will cause a telecommunications utility to experience a competitive disadvantage when compared to other telecommunications utilities.

The Act further requires that KCDHH and the PSC shall enter a memorandum of agreement for coordination and oversight of funding and operations to meet these objectives and those of the eligibility requirements established in the law. One purpose of this investigation is to gather information sufficient to enable the PSC and KCDHH to enter into such agreement.

The PSC, on its own motion, and having been otherwise sufficiently advised, HEREBY ORDERS that:

1. This investigation is initiated for the purpose of complying with the Act.

2. All persons who were parties to Administrative Case No. 333[1] are parties to this proceeding.

3. All entities appearing on the list of vendors attached as Exhibit 1 shall be served a copy of this Order. Any such vendor desiring to participate in this proceeding may petition the PSC to intervene.

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[1]   Administrative Case No. 333, Establishment of Dual Party Relay Telecommunications Services for Hearing-Impaired or Speech-Impaired Persons in Kentucky.

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4. The Executive Director of the KCDHH, Dr. Bobbie Beth Scoggins, shall appear at the public hearing and be subject to cross-examination on the "Plan for Implementation of H.B. 538."

5. Any person desiring to present testimony on the "Plan for Implementation of H.B. 538," or on any other aspect of the Act, shall so notify the PSC within 20 days of the date of this Order and shall include a summary of the testimony to be presented at the public hearing and shall be subject to cross-examination.

6. Any person desiring to file written comments for the PSC's review shall do so within 20 days of the date of this Order. Such comments will be part of the record of this proceeding but persons making such comments will not be subject to cross-examination at the public hearing.
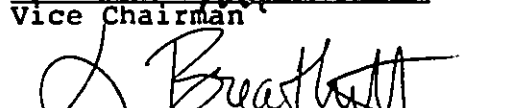
7. There shall be a hearing on December 15, 1994, at 10:00 a.m., Eastern Standard Time, in Hearing Room 1 of the Commission's offices at 730 Schenkel Lane, Frankfort, Kentucky.

Done at Frankfort, Kentucky, this 11th day of November, 1994.

PUBLIC SERVICE COMMISSION

_____
Chairman

_____
Vice Chairman

_____
Commissioner

ATTEST:

_____
Executive Director

APPENDIX A

AN APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION
IN ADMINISTRATIVE CASE NO. 352-DATED NOVEMBER 11, 1994

A PLAN FOR THE IMPLEMENTATION OF

H.B. 538

AN ACT RELATING TO TELECOMMUNICATIONS DEVICES FOR DEAF, HARD OF HEARING AND SPEECH IMPAIRED INDIVIDUALS

KENTUCKY COMMISSION ON THE DEAF AND HARD OF HEARING
(An agency of the Education, Arts and Humanities Cabinet)

DECEMBER 1994

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PROPOSED PLAN FOR IMPLEMENTATION

During the past five years, Kentucky has established an increasingly hospitable and encouraging climate for the use of telecommunications devices by its deaf, hard of hearing and speech impaired citizens. House Bill 538 (page 21), an act relating to telecommunications devices for deaf, hard of hearing and speech impaired individuals, is a culmination and a synthesis of the aims of earlier advances. House Bill 538 mandated that the Kentucky Commission on the Deaf and Hard of Hearing (KCDHH) establish a program to distribute specialized telecommunications devices to any deaf, hard of hearing, or speech impaired person qualified to receive the equipment at no additional cost beyond a single party residence line. The distribution program is to be implemented on or before July 1, 1995.

This access program will enable deaf, hard of hearing, and speech impaired citizens of Kentucky to have equal access to telecommunications services. Use of the Kentucky Relay Services and specialized telecommunications equipment will enable communications access among hearing, deaf, hard of hearing, and speech impaired citizens of Kentucky.

The KCDHH recognizes that the demand for the specialized telecommunications equipment may exceed the funds available to meet the demand, so the following caveats will be included on all forms that the applicants will sign:

> "The KCDHH has a limited amount of funds for the program. Commitments
> for assistance will only be made up to the point where the funds are exhausted.
> There is the possibility due to a large number of applications, that applicants,
> otherwise qualified, may not receive the specialized telecommunications equipment
> due to the exhaustion of these limited funds on an annual basis. Categories for
> distribution will accordingly be established. Within each allocation category,
> assistance will be committed on a nondiscriminatory, first come, first serve basis."

To effectively meet the demands of the deaf, hard of hearing, and speech-impaired population, the TDDs will be distributed under three allocation categories. Twenty-five percent (25%) will be allocated to deaf/hard of hearing/speech-impaired children (see page 8). Another twenty-five percent (25%) will be allocated to applicants who meet the hardship eligibility requirements (see page 8). Fifty percent (50%) will be allocated to those who meet the general eligibility requirements as delineated in Section A, 1a through 1e (see page 7). Within each allocation category, distribution will be solely on a first-come, first-serve basis, which will be determined by the date which KCDHH officially receives an application for certification. Based on accrued experience in the TDD Distribution Program, the KCDHH may, by a 2/3 vote of the Commissioners, adjust the distribution allocation/percentages to meet the need/demand as indicated by the applications.

The KCDHH will issue vouchers to the applicants determined to be eligible, and, in turn, the recipients will choose equipment from an approved list of vendors issued by the KCDHH. These vendors, in exchange for the vouchers, will be paid by the KCDHH, or a bank, subject to

contract negotiations between the Public Service Commission (PSC) and the bank, upon consultation with the KCDHH. Ownership rights and responsibilities for the TDD will belong to the recipient. The recipient is responsible for repair and maintenance, however, all equipment will be under a five year warranty, which will minimize the recipient's financial obligation.

Vendors will apply/request to be put on an approved vendor list. A list of required features is provided in Appendix A. Detailed specifications will be later compiled for release to prospective vendors.

The KCDHH is still exploring other states' TDD Distribution Programs and is seeking input from vendors, manufacturers, and the general public to determine the best purchasing and distribution mechanism for Kentucky. The PSC, with the assistance of the KCDHH, is maintaining a file of individuals and entities that have expressed interest in the TDD Distribution Program. These individuals and entities will be informed of the public hearing in order to solicit input and feedback.

The KCDHH will oversee the execution of the TDD Distribution Program. The KCDHH will issue invoices, via electronic mail or mail, directly to the bank into which the funds have been deposited, and submit copies of the invoices, via electronic mail or mail, to the PSC. The KCDHH shall hire, through personal services contracts, a full-time TDD Distribution Program Coordinator and an administrative assistant/interpreter. Under the supervision of the Executive Director of the KCDHH, they will evaluate and approve any and all disbursements from the TDD Distribution Program funds. The KCDHH shall enter into memoranda of agreement with the PSC for coordination and oversight of funding and operations to meet the objectives of the TDD Distribution Program (H.B. 538, page 4 of 5, line 13-16). KCDHH shall also issue administrative regulations in accordance with the provisions of KRS Chapter 13A. Appropriate categories of disbursement will be determined by the PSC and the KCDHH. Such disbursements may include, but not be limited to:

1. Vendors for equipment, supplies, replacement parts, and service.

2. For maintenance, repair and related services for the KCDHH Loan Program, which will have twenty (20) TDDs.

3. To the KCDHH for administrative costs and any service rendered at the request of the KCDHH for its cost in implementing and operating the program up to and including the hiring of coordinator and assistant. (See Appendix B for a detailed breakdown and justification of the projected costs.)

A. Application Procedures for Certification of Eligibility

The application form may be obtained from the KCDHH. Completed applications shall be forwarded to:

Kentucky Commission on the Deaf and Hard of Hearing
ATTN: TDD Distribution Program
134 Brighton Park Blvd.
Frankfort, KY   40601

The KCDHH telephone number is 1-800-372-2907 or 502-573-2604 V/TDD.

The coordinator shall review all applications to determine that eligibility requirements as defined in Section C (page 7-9) are satisfied. Exceptions are listed in Section A (8a, 8b, 8c) and (9a-9e) (page 6).

1.   All applications will be made on forms to be developed by the KCDHH
        and must be accompanied by such documented proof of eligibility as will
        be required by the KCDHH. Such proof may include but is not limited to:
        (a) Certification of deafness or disability; (b) Copies of income tax returns
        for the preceding year; (c) AFDC, SS, SSI, SSDI documents, and (d) any
        documents to determine the eligibility and priority ranking. The KCDHH
        staff will provide assistance in completing forms when necessary.

2.   All signed and completed applications may either be submitted in person
        or via mail.

3.   Equipment will be provided for a four year period of time, renewable thereafter in
        four year periods upon an expedited reapplication and continued compliance with the
        applicable conditions. The KCDHH reserves the right, during the re-application
        process or at any time during the four year period, to re-categorize an applicant based
        on any change in status.

4.   During the first two years when there is an expected flood of applications, applicants
        will be advised in writing that their applications may take four (4) to six (6) months
        to process. At the end of second year, the application process will be re-evaluated,
        and if the supply-demand ratio permits, a sixty-day response time will be initiated.

5.   Applicants will be notified whether their application, or renewal application,
        has been accepted or rejected within sixty (60) calendar days of the KCDHH's
        official receipt of the application, unless a letter as described in Section A4, above,
        has been issued indicating otherwise. If an application is rejected, justification will
        be provided, and the applicant will be informed that he/she may reapply at a future
        time.

6.   To determine the list of recipients on a first-come, first-serve basis, the date
        stamped on their application upon its arrival by hand delivery or by mail at the
        offices of the KCDHH will be considered official.

7. All applicants under this Plan must report any changes in eligibility status. Applicants must also report any change of address to KCDHH within thirty (30) days of such change.

8. Original application shall not be approved:

    (a)   When the applicant has already been issued a voucher which is still valid toward the purchase of technological assistive devices under this program.

    (b)   When the applicant has received a device from TDD Program within the preceding four years.

    (c)   When the person is an active client of the Department of Vocational Rehabilitation and receives a TDD as part of an IWRP (Individual Written Rehabilitation Plan).

9. Application for replacement equipment shall not be approved when:

    (a)   A device previously issued by the KCDHH has been subjected to abuse or misuse by the recipient.

    (b)   The recipient fails to provide a police report of a stolen device or refuses to cooperate with the police investigation in the prosecution of the suspect, including the refusal to testify in court when requested to do so.

    (c)   The recipient is found negligent in a police report of stolen device, such as doors to the house or car left unlocked or unattended.

    (d)   The recipient has lost the device.

    (e)   The recipient has sold the device.

10. Replacement equipment may be given if a specialized telecommunications equipment is damaged through natural disasters, such as lightning, electrical storms, or floods. The recipient must first send damaged equipment to the vendor. If the vendor certifies to the KCDHH that the equipment provided it is still under valid warranty or is unrepairable due to natural disaster, a replacement unit shall be issued to the recipient, upon reapplication, subject to availability and the eligibility criteria as outlined in Section C and the Application Procedures for Certification of Eligibility in Section A.

11. Exchange of equipment may be permitted where the original equipment can no longer be used by a recipient due to a change in status, such as deteriorating vision or hearing or when a new device has become available through KCDHH and is

deemed more appropriate to the recipient's disability than a device previously purchased by the recipient through a voucher issued by the KCDHH . A recipient must obtain a letter from a KCDHH approved professional stating that the recipient would benefit from another device available through the KCDHH.

12. Fraud

If a recipient obtained specialized telecommunications equipment under false premises or misrepresentation of facts on the KCDHH application, the KCDHH reserves the right to demand return of such equipment. Such a recipient may be prosecuted to the fullest extent of the law.

B.   Processing System

1.   Processing

Processing, redemption and invoicing shall be governed by internal agency procedures, contractual agreements and the general payment practices that shall be applied uniformly to applicants and contracted vendors from the KCDHH approved list.

2.   Liability

Recipients shall be responsible for any repairs to or loss of a device issued in the program, except where the KCDHH retains ownership of the device subject to provisions in the loan agreement form. The TDD Distribution Program shall not be responsible for the payment of the recipient's monthly telephone bill, replacement papers for the TDD, purchase or lease costs of recipient's telephone, the costs of replacement light bulbs for signal devices, or any other costs associated with the functions and use of the TDD and signaling devices.

3.   Confidentiality

All applications to the TDD Distribution Program and other client materials shall be kept confidential by commission personnel and other persons authorized by the KCDHH to view such materials. An applicant award shall also be confidential and shall not be released without the applicant's permission.

C.   Criteria for Awarding Assistance

1.   General Criteria:

(a)   Applicant must be a legal resident of Kentucky.

(b)   Applicant must be deaf, hard of hearing or speech impaired to the point where applicant cannot use the telephone even with maximum amplification without the specialized telecommunication equipment, or speech impaired to the extent that his/her speech is unintelligible or non-existent (e.g., larygectomees who cannot use esophageal speech or electronic voices, stroke victims who have lost the power of speech, but not hand/arm mobility, etc.)

(c)   The disability must be a permanent disability. In questionable cases, professional verification of the extent and permanence of the disability may be required at the applicant's expense. Otherwise, the KCDHH or a licensed physician, audiologist, or a speech pathologist will certify and determine eligibility by disability. As an alternative, public or private agencies working with deaf, hard of hearing, or speech impaired individuals may provide certification and determine eligibility, subject to approval by the KCDHH.

(d)   Applicants must be current subscribers to or have applied for telephone service, which includes having a telephone line installed in their home at their own expense, and paying monthly telephone bills. Exceptions to this will be individuals who receive assistance from programs designed to provide telephone services to those who would not normally be able to afford it. The TDD Distribution Program Coordinator will work closely with these assistance programs to ensure their availability and accessibility to deaf individuals.

(e)   Minimum age of applicant shall be five (5) years. In the case of applicants between five (5) and eighteen (18) of age, parents or guardians must apply on behalf of applicants and assume full responsibility for the equipment.

2.   Allocation of TDDs

    (a)   <u>25% of TDDs to be distributed in any calendar year will be made available to Deaf/Hard of Hearing/Speech Impaired Children</u>.

    Those who are between five (5) and eighteen (18) years of age.

    (b)   <u>25% of TDDs will be made available to Hardship cases.</u>

    (1) Those on public assistance (AFDC, SS, SSDI, SSI, Medicaid, Food stamps, General Assistance, etc.)

    (2) Those having gross family incomes of less than 80% of State's median income, based on federal census data.

    (3) Those having gross family income of between 80% and 115% of State's median income, based on federal census data.

(4) Special hardship cases where disposable income is limited despite family gross income exceeding limits in (2) or (3) above (e.g., recurring high medical expenses, etc.).

(c)   50% of TDDs will be made available to the deaf, hard of hearing and speech impaired population.

Recipients must meet general eligibility requirements as delineated in Section C, 1a through 1e. All TDDs distributed under this Third Priority Category will be on a first come, first serve basis as determined by the date the application is officially received by the KCDHH.

(d)   Adjustment of Allocation Categories

By a 2/3 vote, the KCDHH Commissioners shall, depending on the demand and number of qualified applicants under each allocation category, adjust the percentages to reflect such demand.

D. Security

1.   Equipment obtained under this Plan may not be sold, loaned, or otherwise transferred out of the possession of the original recipient.

2.   Recipient must notify the KCDHH within five (5) working days if the equipment is lost, stolen, or damaged, and, if stolen, local police must be notified and a copy of the police report forwarded to the KCDHH within five (5) working days of the date the theft was reported. Recipient must also aid in prosecution of the perpetrator of the theft, if and when located.

3.   When the equipment has been provided as a result of hardship status, a recipient will inform the KCDHH of any change in the condition that resulted in the hardship determination during the re-application at the end of the four year period.

E. Maintenance and Repair

It is anticipated that all maintenance and repair of the equipment will be handled by the manufacturing companies' technicians. Contract(s) with manufacturer(s) and vendors will include a five year warranty. Repairs and maintenance is to be handled by the recipients themselves; however, KCDHH will provide assistance when necessary. The KCDHH will maintain a stock of at least twenty (20) "loaner" units to be used by recipients whose TDDs have to be sent to the manufacturer for repairs. To be on the Approved Vendor List, vendors must provide five year warranties for their units, so it is expected that the recipient's repair costs will be minimal for each four year application period.

F. Loan Program

The KCDHH will maintain a stock of twenty (20) "loaner" units to be used by recipients whose TDDs have to be sent to the manufacturer for repairs. This loan program will only be available to participants of the TDD Distribution Program. The loan period will be until the recipient's TDD is returned in working condition.

1. Notwithstanding the 30 day contract period, the KCDHH reserves the right to repossess the equipment at any time when there is any change in circumstances, repeated negligent or willful damage to the equipment; or other breach of responsibility on the part of the recipients.

2. All loaner equipment will be marked with non-removable identification by the company supplying the equipment. In the event the equipment is lost or stolen, manufacturers, distributors and repairmen will be notified of the serial numbers of the missing equipment so that it can be identified and returned to the KCDHH. Anyone who attempts to sell or knowingly purchase stolen equipment will be prosecuted to the full extent of the law.

3. If the recipient moves to a different address within the Commonwealth of Kentucky, the KCDHH must be notified immediately of the address change. If a recipient moves out of Kentucky, the equipment must be returned to KCDHH.

G. Public Service Commission Maintenance of Funds

The PSC shall determine a funding mechanism to provide no more than $200,000 annually to the KCDHH effective January 1, 1995. These funds shall be used for the TDD Distribution Program by the KCDHH as set out in House Bill 538. It is expected that the full $200,000 will be provided in the first year's operation of the TDD Distribution Program.

H. Advertisement of Program Availability

The KCDHH already has an information network that can reach a great percentage of those deaf and hard of hearing residents likely to be affected by the Plan. These include the agency's own newsletter, the KCDHH Communicator; the mailing lists of newsletters of several organizations of, by and for deaf and hard of hearing individuals; the national deaf publications, and the staging of public affairs and functions. A communication network will be established to advertise nationally. Follow-up communications will also be employed to see that the program obtains maximum coverage.

Efforts to reach speech-impaired individuals will be through the American Heart Association (Stroke Club), United Cerebral Palsy, United Way, Speech Therapist Association, Kentucky Speech and Hearing Association, the Department of Vocational Rehabilitation and the Kentucky Disabilities Coalition.

Beyond the above, it is anticipated that much word-of-mouth advertising will take place among the target population itself. The KCDHH is also maintaining a file of individuals who have already inquired about the program, and these individuals will also be notified and asked to spread the word.

I. Outreach and Training Program

The KCDHH realizes that TDDs are a relatively new kind of equipment, familiar at present to only a minute portion of the general public. The TDD Distribution Program has never been attempted in Kentucky before, so essential elements of the program, such as eligibility, application procedure, use and benefits of TDDs, and responsibilities of recipients must be made known. For these reasons, the KCDHH shall undertake an aggressive outreach program to be conducted by the TDD Distribution Program Coordinator and the Administrative Assistant/Interpreter.

Once determined to be eligible, the applicant must demonstrate an ability to send and receive messages with a TDD in order to obtain the voucher. For those applicants who need training, the Coordinator and Administrative Assistant/Interpreter shall implement and provide such training. Training will especially reach out to applicants in Western and Eastern Kentucky and K-12 students at the Kentucky School for the Deaf and in mainstreamed public school programs. No applicant shall be issued a voucher until competence is demonstrated or the requisite training is completed.

J. Establishment of Advisory Board

To benefit from input from the general public, the KCDHH shall establish an Advisory Board to guide the administration of the TDD Distribution Program. The composition of this Advisory Board shall be as follows:

Six consumers, of which two shall be deaf, two shall be hard of hearing and two shall be speech impaired, to be named by the KCDHH.

One representative of the Kentucky Telephone Association to be named by that Association.

One member of the Public Service Commission who shall serve ex-officio and be named by that organization.

One commission member of the Kentucky Commission on the Deaf and Hard of Hearing who shall serve ex-officio to be named by that organization.

The TDD Advisory Committee will organize itself with a Chairman and other officers as they require. The TDD Advisory Committee will make such recommendations as they deem necessary for consideration by the KCDHH. The TDD Advisory Committee shall make an annual report on the committee activities to the KCDHH.

APPLICATION FOR CERTIFICATION
TO RECEIVE A TELECOMMUNICATIONS DEVICE
FOR THE DEAF (TDD)

Name of Person
Being Certified
(Please Print)
_____
Last Name   First Name   Initial

Address
_____
Number   Street   City   Zip

Telephone   (_____)_____   Soc. Sec. No. _____/_____/_____
               Area Code

Please State Date of Birth of Person to be Certified:_____
                                     Month   Day   Year

The following section of the form is to be completed by a licensed physician, audiologist, speech and language pathologist, or public or private agency working with deaf, hard of hearing and speech impaired individuals.

The above named person has applied for a telecommunications device for the deaf to assist them in accessing the telephone system. Please verify the applicant's deafness or speech impairment by checking the description below that most closely matches his/her deafness or speech impairment. If you have any questions, please call the Kentucky Commission on the Deaf and Hard of Hearing at **1-800-372-2907** Voice or TDD.

Hearing Loss or Impairment::

_____   Deaf or Hard of Hearing - This person is deaf in both ears to the degree that he/she is not likely to understand speech on a telephone even if amplified or is likely to have reduced ability to use a standard telephone.

_____   Speech Impaired - This person has a condition that physically renders him/her incapable of speaking clearly on an ordinary telephone.

I certify that the applicant has deafness or speech impairment as checked which restricts his/her use of the telephone. (Only professionals mentioned above are authorized to complete this form.)

Name _____   Title _____
        (Professional as outlined above)
Address _____
Phone # (   ) _____   State Lic. # _____
Signature _____

Signature of Parent or Guardian is required if the Applicant is a minor.
Signature _____   Date _____

APPENDIX A

APPROVAL OF TDD EQUIPMENT

FOLLOWING IS A LIST OF MINIMUM FEATURES NECESSARY FOR TDD EQUIPMENT TO APPROVED UNDER THIS PROGRAM

(MANUFACTURERS AND VENDORS MUST SUBMIT SPECIFICATIONS TO THE KCDHH FOR APPROVAL)

TDD: A text telephone is a device that permits people with hearing and/or speech impairment to communicate using the standard telephone system without the aid of an interpreter. The device itself generally consists of a keyboard, a display screen and a telephone cradle. Hearing persons who have no TDD may use the Kentucky Dual Party Relay Service to communicate with persons who utilize a TDD for communication.

TDD EQUIPPED COMPUTER: Computer software that enables computer to function as TDD. Software to be named later.

TDD and Signaler Features:

* twenty (20) character display
* acoustic coupler
* four (4) row keyboard
* user replaceable, rechargeable batteries
* two message buffers
* message send capability
* 5 year warranty
* portable
* UL listed AC adapter
* auto voice announcer
* auto answer character printer (on paper)
* direct connect/dial
* ASCII
* keyboard dialing
* remote message retrieval
* call status (busy, ringing)
* follow on dialing for credit card or information systems
* alerting signal
* relay voice announcer
* auto answer msg. for both voice and TDD
* selectable print size for printer
* 32K memory
* built-in ring flasher
* last number redial
* name and messages and phone directory entries
* amplified ring signaler
* voice carry over
* hearing carry over

APPENDIX B
KCDHH TDD DISTRIBUTION PROGRAM
ANNUAL BUDGET PROJECTIONS[1]
FY 95-96

Telecommunication Devices

416 TDDs during the first year[2]	$208400
(416 @ $500/unit)	

SUBTOTAL	**$208400**

Administrative Expenses

TDD Coordinator[3]	$ 30000
Administrative Assistant/Interpreter[4]	$ 21000
Office Rent[5]	$ 2200
Office Supplies[6]	$ 2000
Travel Expenses[7]	$ 1000
Printing and Postage[8]	$ 3000
Additional Interpreter Services[9]	$ 1000
Bookkeeping Costs[10]	$ 200
Telephone charges[11]	$ 1500

SUBTOTAL:	**$ 61900**

Start-up Expenses

Auditor of Public Accounts[12]	$ 600

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[1]Surplus funds will be used to purchase additional TDDs. With $208,400 during FY 95-96 and a price per unit of $350 (30% of $500 = wholesale price), it will be possible to buy 595 TDDs the first year. During FY 96-97, $146,540 and a price per unit of $350 (30% of $500 = wholesale price), it will be possible to buy 418 TDDs during the second year.

[2]The projected price per unit could change depending on the final implementation of the TDD Distribution Program. The current projected price per unit is based on retail prices.

[3]See attached job descriptions. Both positions are on an as-needed basis.

[4]See footnote 3.

[5]Estimated using Division of Real Properties (Department of Finance)recommended 300 square feet for two individuals at a rental rate of $7.20 per square foot annually.

[6]Estimated and prorated based on current volume used by the KCDHH.

[7]Estimated using state rates for lodging, food, and mileage and prorated using KCDHH's current travel.

[8]Estimated charges.

[9]Additional interpreter services will be needed for outreach efforts and training sessions. Approximate cost per hour, based on current suggested fee schedule, is $22.

[10]For related bank charges, check costs, maintaining the voucher system, and auditing fees.

[11]Estimated and prorated on KCDHH's current telephone expenses.

Consultants[13]	$ 1000
Office Furniture[14]	
Desks (2)	$ 1500
Chairs (2)	$ 1000
Partitions (4)	$ 3500
Chair Mats (2)	$ 100
TDDs (2)	$ 900
Telephones (2) (including hookup)	$ 350
Computer work stations (2)	$ 4450
Computer software (2 sets)	$ 2300
E-mail networking	$ 1000
Laser Printer	$ 2000
File Cabinets	$ 1000
20 TDDs	$ 10000
SUBTOTAL:	$ 29700
TOTAL FY 95-96:	$ 300000

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[12]Auditor of Public Accounts' fee for setting up a bookkeeping system.
[13]For the expertise, legal and otherwise, needed to implement the TDD Distribution Program.
[14]All office furniture costs are based on current prices and is compatible with what is being used by the KCDHH staff. The twenty (20) TDDs are to be used for the KCDHH Loan Program. Computer prices are based on the current price contract developed by the Department of Finance and approved by the Department of Information Systems.

KCDHH TDD DISTRIBUTION PROGRAM

ANNUAL BUDGET PROJECTIONS[15]
FY 96-97

Telecommunication Devices

293 TDDs	$ 146540

SUBTOTAL:	$ 146540

Administrative Expenses

TDD Coordinator[16]	$ 30000
Office Rent[17]	$ 2160
Interpreter Services[18]	$ 15000
Travel Expenses[19]	$ 1500
Office Supplies[20]	$ 1000
Printing and Postage[21]	$ 2000
Bookkeeping Costs[22]	$ 300
Telephone Charges[23]	$ 1500

SUBTOTAL:	$ 53460

TOTAL FY 96-97:	$ 200000

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[15]Any surplus funds will be used to purchase additional TDDs.

[16]See the attached job description. Positions are on an as-needed basis.

[17]Estimated using Division of Real Properties' (Department of Finance) recommended 300 square feet for two individuals at a rental rate of $7.20 per square foot on an annual basis.

[18]The TDD Program Coordinator will acquire interpreter services on an as-needed basis in the office. Also, additional interpreters will be needed for outreach efforts and training sessions. Approximate cost per hour, based on current suggested fee schedule, is $22.

[19]Estimated using state rates for lodging, food, and mileage and prorated using KCDHH's current travel.

[20]Estimated and prorated based on current volume used by the KCDHH.

[21]Estimated and prorated based on current volume used by the KCDHH.

[22]For related bank charges, check costs, maintaining the voucher system, and auditing fees.

[23]Estimated and prorated on KCDHH's current telephone expenses.

TDD DISTRIBUTION PROGRAM COORDINATOR
JOB DESCRIPTION

General Description of Duties/Responsibilities:
1. Day-to-day operations of the TDD Distribution Program
2. Assisting individuals with application for certification process
3. Determination of eligibility and assessing equipment needs
4. Disseminating information on the program to interested individuals, groups, and organizations. (Outreach work)
5. Develop meaningful public relations programs through utilizing the media for increased public awareness and participation
6. Demonstrate the use of TDDs to interested parties
7. Prepare reports to the public and all agencies with jurisdiction
8. Process applications for certification of eligibility
9. Coordinate requests and process shipping orders. Troubleshooting.
10. Assess and recommend approval for vendors and manufactures
11. Publish and distributes lists of approved vendors and manufacturers
12. Establish a bookkeeping system with assistance from Auditor of Public Accounts
13. Coordinate and maintain distribution program, design and provide a training program for applicants
14. Other duties as directed by the KCDHH Executive Director

Knowledge, Skills and Capabilities
A working knowledge of the principles and methods used in communications with persons who are deaf, hard of hearing and speech impaired :

1. Fluency in signed English and American Sign Language
2. Understanding of Deaf Culture
3. Knowledge of Deafness and speech impairment
4. Knowledge of communication aids and technology
5. Interviewing skills
6. Knowledge of public relations
7. Skills in public speaking and outreach
8. Ability to prepare reports and conduct studies
9. Knowledge of community agencies and organizations relating to deaf, hard of hearing and speech impaired individuals
10. Self-motivated and an ability to function independently and make independent judgments.

Education/Experience
1. Bachelor's Degree
2. Employment or special training in areas outlined in the job description
3. Any combination of education and experience that shall be substantially equivalent to the above education and experience.

ADMINISTRATIVE ASSISTANT/INTERPRETER
JOB DESCRIPTION

General Description of Duties/Responsibilities:

1. Primary interpreter for the Coordinator with eligible applicants and for group and agency presentations
2. Schedule interview appointments for eligible applicants
3. Assist the Coordinator in compiling reports
4. Assist the Coordinator in documenting equipment orders as set up by the Auditor of Public Accounts
5. Provide presentations to groups and agencies
6. Record all equipment returned due to malfunction, work with the vendor to replace or repair defective equipment, and document the status of damage and report on the reliability of equipment to the Coordinator
7. Process application of certification requests
8. Assist coordinator in training seminars
9. Other related duties as needed.

Knowledge, Skills and Capacities

1. Advanced Level from Kentucky Interpreting Screening Skills
2. Accounting Procedures
3. Understanding of Deaf Culture
4. Knowledge of Deafness and speech impairment
5. Knowledge of communication aids and technology
6. Interviewing Skills
7. Self-motivated

Education/Experience

1. High School Graduate or equivalent
2. Associate Degree of Interpreting or equivalent experience
3. Accounting Experience
4. Good communication (oral and written) skills in English and ASL
5. Experience in working with deaf, hard of hearing and speech impaired individuals

KCDHH TDD DISTRIBUTION PROGRAM

BUDGET JUSTIFICATIONS

1) Telecommunications Devices

During FY 95-96, the KCDHH's goal is to distribute at least 416 TDDs to eligible applicants. During FY 96-97, at least 293 will be distributed to eligible applicants, unless additional funds are appropriated by the 1996 General Assembly. Funds not expended in any given year will be held as "carryover" into the next fiscal year to insure adequate funding as the program becomes more "user friendly".

There are no reliable statistics upon which to project the demand or popularity of this program. It is hoped that the PSC and the KCDHH will be flexible enough to meet the demands of the public for this service. The KCDHH extends a cooperative attitude to it's partners in this venture.

The KCDHH suggests that the second year of operations should begin to produce some better concept of the scope of this effort and the reaction of the deaf and hard of hearing populace.

2) Administrative Expenses

The KCDHH is the smallest agency within the Education, Arts, and Humanities Cabinet with a staff of seven. With present staffing, it is not possible to absorb the additional fiscal and administrative responsibilities for implementing and operating a TDD Distribution Program. As a leading agency charged with addressing the needs of deaf and hard of hearing Kentuckians (KRS 163.510), and in the face of the Americans with Disabilities Act (ADA) of 1990 (which has recently become 100% implemented under the timelines prescribed by law) it is incumbent on this agency to not only to maintain the current level of programs and activities it directs but also to find ways to efficiently expand in scope and operation to ensure compliance by the KCDHH with the provisions of H.B. 538 (TDD Distribution Program).

3) Office Rent

The KCDHH office currently leases 1702 square feet of administrative office space. The average rate for state and non-state offices is $7.20 per square feet for office space. This proposed budget item will enable the KCDHH to obtain an additional 300 square feet for the TDD Coordinator and the Administrative Assistant/Interpreter for the operation of the TDD Distribution Program.

4) Personnel

In addition to the supervisory time of the Executive Director of the KCDHH and the time of the KCDHH fiscal coordinator, the scope of this program will require two additional personnel. A

TDD Distribution Program Coordinator position will be required along with an Administrative Assistant/Interpreter.

4) Interpreter Services

It is possible that the position of TDD Coordinator may be filled by a qualified deaf or hard of hearing individual. Facilitation of communication for this staff member will not only enable the TDD Coordinator to function properly and fulfill the obligations of the TDD Distribution Program, but it will also satisfy the requirements of ADA and its provisions requiring reasonable accommodations for the employment of deaf and hard of hearing individuals. Interpreter services will be necessary when conducting training sessions, general administrative duties, and/or outreach efforts.

5) Start-up Expenses

The KCDHH has insufficient resources to carry out the mandate of H.B. 538. The budgeted start-up expenditures will enable the Executive Director and TDD Coordinator to implement and continue the TDD Distribution Program on an on-going basis. It is anticipated that the organization and preparation of policies and procedures together with the public awareness campaign for the TDD Distribution Program will be completed just prior to implementation of the program. The continuing operation of the program will then consume the time and materials further budgeted. The establishment and monitoring of a sophisticated bookkeeping and tracking system (as suggested by the Auditor of Public Accounts), coordinating with legal counsel, obtaining legal advice on the logistics of the program, and one-time purchases of office furniture and equipment are part of the start-up and organizational tasks and duties.

APPENDIX C

21

GENERAL ASSEMBLY
COMMONWEALTH OF KENTUCKY

REGULAR SESSION 1994

HOUSE BILL NO. 538

TUESDAY, MARCH 15, 1994

The following bill was reported to the Senate from the House and ordered to be printed.

AN ACT relating to telecommunication devices for the deaf, hard of hearing, or speech-impaired.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

1   Section 1.   KRS 278.547 is amended to read as follows:

2   As used in *Sections 1 to 4 of this Act* {this section, KRS 278.548, and 278.549}, unless

3   the context requires otherwise:

4   (1)   "Telecommunications device for the deaf" or "TDD" means a keyboard mechanism

5   attached to a standard telephone set which allows for messages to be typed rather

6   than spoken.

7   (2)   "*Telecommunications* {Dual-party} relay service" means a procedure by which a

8   *deaf,* hard-of-hearing, or speech-impaired TDD user can communicate with an

9   intermediary party, who then verbally relays the first party's message or request to a

10   third party, or vice versa. The service includes the switching, transmitting, and the

11   voice and typed translation of calls {but does not include the furnishing of TDDs or

12   other telecommunication devices to users of the system}.

13   (3)   *"TDD distribution program" means the program to furnish TDDs to deaf, hard-*

14   *of-hearing, and speech-impaired persons in order that they may use the*

15   *telecommunications relay service. The program shall include maintenance and*

16   *repair of the equipment.*

17   Section 2.   KRS 278.548 is amended to read as follows:

18   The commission shall establish a program to make *telecommunications* {dual-party} relay

19   services available not later than October 1, 1991, and shall make interstate

20   *telecommunications* {dual-party} relay services available no later than July 1, 1992. The

21   *telecommunications* {dual-party} relay service, whether intrastate or interstate, shall be

22   operated seven (7) days a week for twenty-four (24) hours per day for all *deaf,* hard-of-

23   hearing, or speech-impaired telephone subscribers within the Commonwealth. In order to

24   determine the most cost effective method of providing *telecommunications* {dual-party}

1   relay services that will meet the requirements of the _deaf,_ hard of hearing, and speech-

2   impaired, the commission shall initiate an investigation, conduct public hearings, and

3   solicit the advice and counsel of _the deaf,_ hard-of-hearing persons, and speech-impaired

4   persons and the organizations serving them. _The commission may assist the Commission_

5   _on the Deaf and Hard of Hearing in the TDD distribution program established_

6   _pursuant to Section 5 of this Act._

7   Section 3.   KRS 278.549 is amended to read as follows:

8   Users of a _telecommunications_ {dual-party} relay service shall pay rates no greater than

9   the rates paid for functionally equivalent voice communication services provided without a

10   _telecommunications_ {dual-party} relay. The commission shall determine the appropriate

11   funding mechanism for the _telecommunications_ {dual-party} relay system. The

12   telecommunications industry shall not be required to absorb the cost of funding the

13   _telecommunications_ {dual-party} relay service. The commission may use assistance from

14   public agencies of the state or federal government or from private organizations to

15   accomplish the purposes of KRS 278.547 to 278.549.

16   SECTION 4.   A NEW SECTION OF KRS CHAPTER 278 IS CREATED TO

17   READ AS FOLLOWS:

18   _(1) (a) The Public Service Commission shall determine the appropriate funding_

19   _mechanism for the TDD distribution program established pursuant to_

20   _Section 5 of this Act. The funding mechanism shall be designed to collect_

21   _no more than two hundred thousand dollars ($200,000) per year from_

22   _subscribers of telecommunication utilities. The telecommunications_

23   _industry shall not be required to absorb the cost of funding the TDD_

24   _distribution program._

25   _(b)   The Public Service Commission shall distribute the funds collected from_

26   _this funding mechanism to the Commission on the Deaf and Hard of_

27   _Hearing for the purpose of implementing and operating the TDD_

1   *distribution program. The secretary of the cabinet to which the Commission*

2   *on the Deaf and Hard of Hearing is attached by statute or executive order*

3   *shall establish oversight conditions with the Commission on the Deaf and*

4   *Hard of Hearing to ensure the funds are being used solely for the purposes*

5   *consistent with this section and Section 5 of this Act.*

6   *(c) The Public Service Commission, with the advice of the Commission on the*

7   *Deaf and Hard of Hearing, shall initiate an investigation, conduct public*

8   *hearings, and determine the appropriate funding mechanism for the TDD*

9   *distribution program no later than January 1, 1995. As part of this*

10   *determination, the commission may review the funding mechanism for the*

11   *telecommunications relay service pursuant to KRS 278.549. The*

12   *commission shall consider whether a telecommunications utility*

13   *experiences a competitive disadvantage resulting from the funding*

14   *mechanism when compared to other telecommunication utilities.*

15   SECTION 5. A NEW SECTION OF KRS CHAPTER 163 IS CREATED TO

16   READ AS FOLLOWS:

17   *(1) As used in this section and Section 6 of this Act:*

18   *(a) "Telecommunications device for the deaf" or "TDD" means a keyboard*

19   *mechanism attached to a standard telephone set which allows for messages*

20   *to be typed rather than spoken; and*

21   *(b) "TDD distribution program" means the program to furnish TDDs to deaf,*

22   *hard-of-hearing, and speech-impaired persons in order that they may use*

23   *the telecommunications relay service established pursuant to KRS 278.548.*

24   *The program shall include maintenance and repair of the equipment.*

25   *(2) (a) On or before July 1, 1995, the Commission on the Deaf and Hard of*

26   *Hearing shall establish a program to distribute TDDs to any deaf, hard-of-*

27   *hearing, or speech-impaired person qualified to receive the equipment*

1   _pursuant to subsection (3) of this section._

2   _(b)   Prior to the establishment of the TDD distribution program, the_

3   _Commission on the Deaf and Hard of Hearing shall initiate an_

4   _investigation, conduct public hearings, and solicit the advice and counsel of_

5   _deaf, hard-of-hearing, and speech-impaired persons and the organizations_

6   _serving them._

7   _(c)   The Commission on the Deaf and Hard of Hearing may contract with any_

8   _person, public, or private organization to provide part or all components of_

9   _the TDD distribution program, if applicable statutory procurement_

10   _provisions are followed. The Commission on the Deaf and Hard of Hearing_

11   _may use assistance from public agencies of the state or federal government_

12   _or from private organizations to accomplish the purposes of this section._

13   _The Kentucky Commission on the Deaf and Hard of Hearing shall enter_

14   _into memoranda of agreement with the Public Service Commission for_

15   _coordination and oversight of funding and operations to meet the objectives_

16   _of Sections 4 and 5 of this Act. The Commission on the Deaf and Hard of_

17   _Hearing may also enter into memoranda of agreement with other state_

18   _agencies to accomplish the purposes of this section._

19   _(3)   Factors to determine a person's eligibility to receive a TDD shall include, but not_

20   _be limited to:_

21   _(a)   Kentucky residency;_

22   _(b)   Attainment of at least five (5) years of age; and_

23   _(c)   Certification as deaf, hard of hearing, or severely speech-impaired by a_

24   _licensed physician, audiologist, speech pathologist, or by any other method_

25   _recognized by the Commission on the Deaf and Hard of Hearing._

26   _Certification implies that the individual cannot use the telephone for_

27   _communication without adaptive equipment._

1   *(4)   No more than one TDD shall be provided to a person qualified to receive the*

2   *equipment pursuant to subsection (3) of this section. However, a malfunctioning*

3   *TDD originally distributed by the program may be returned for repair or*

4   *replacement. The Commission on the Deaf and Hard of Hearing may prioritize*

5   *distribution of the TDDs on the basis of need.*

6   *(5)   The Commission on the Deaf and Hard of Hearing shall establish procedures for*

7   *application and distribution of TDDs by the promulgation of administrative*

8   *regulations in accordance with provisions of KRS Chapter 13A.*

9   SECTION 6.   A NEW SECTION OF KRS CHAPTER 163 IS CREATED TO

10 READ AS FOLLOWS:

11 *The Commission on the Deaf and Hard of Hearing shall provide to the General*

12 *Assembly an annual report on the operation of the TDD distribution program. The*

13 *report shall be due on July 1 of each year, beginning July 1, 1995, and, at a minimum,*

14 *provide:*

15 *(1)   The number of persons served and the number of TDDs distributed;*

16 *(2)   The revenues and expenditures of the program;*

17 *(3)   Discussion of any major policy or operational issues;*

18 *(4)   Any changes the commission plans to make in the program that does not require*

19 *legislative action; and*

20 *(5)   Any proposals for legislative changes in the program.*

APPENDIX D

TDD APPROVED MANUFACTURERS

(Telecommunications Devices for the Deaf[24])

Manufacturer	Model	Cost
Ultratec	Superprint 4420 (ASCII option)	$499.00 $ 49.95
Ameriphone	Dialogue Model III-P (ASCII option)	$489.00 $ 49.95
Krown	MP 2000 (ASCII option)	$499.00 $ 50.00
Telecom	Teleview (ASCII option)	$499.00 $ 39.99
Ultratec	Uniphone 1100[25] (VCO/HCO included)	$279.00
Ameriphone	Dialogue VCO[26]	$250.00

nov4ttyd.doc

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[24]All prices listed are based on retail prices. During a phone conversation, Ultratec stated that 'bulk' or wholesale prices are 30-35% less than retail prices.

[25]This is the only model that specifically incorporates VCO and HCO features; however, it does not include a number of other features, such as a printer, 32K memory, ASCII option that other TDD models have.

[26]This model, while it includes VCO features, does not include a number of other features that other TDD models have.
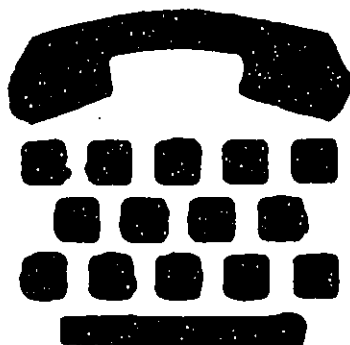
TTY? TT?

TTP? TDD?

What's in a Name?

When deaf people entered the telephone market in the 1960's, 200 to 300 pound TELETYPEWRITERS were used. The acronym for teletypewriter was "TTY".

In the 1970's, "TDD" was used for portable TELECOMMUNICATION DEVICE FOR THE DEAF. There were quite a few objections to including terminology of "for the deaf" to a device which all people could use. One does not have to be deaf to use a TDD. People with no hearing loss, some hearing loss, or speech-impairments could use such a device as well as anyone. Should "for the deaf" be used, equality must be maintained by including "for the hearing" in the names of some devices.

Since the terms "telephone device for the hearing" (TDH) or "microphones for the speaking" (MS) are unacceptable to the general public, efforts to remove "for the deaf" should be made.

The Federal Communications Commission (FCC) recognized the need to enhance the equality of such terminology, and calls the devices TEXT TELEPHONEs which, like telephone, is more generic. However, the acronym TT is not acceptable in the deaf community. TT in sign language reflects "toilet". Spoken, it sounds like "tee tee". Can you imagine how embarrassing it would be if you were referred to a rest room instead of a TTY?

As indicated in some of the letters, TDI is being requested to adopt the use of the acronym "TTY" immediately.

TDI's policy is to serve all consumers of visual telecommunications. TDI has taken a firm stand and endorses the acronym of "TTY" to represent all Text Telephones.

So You Now Have A Telecommunications Device For The Deaf (TDD) . . .

Modem
Printer
Modem
LED Message Display
Light Indicator
Keyboard
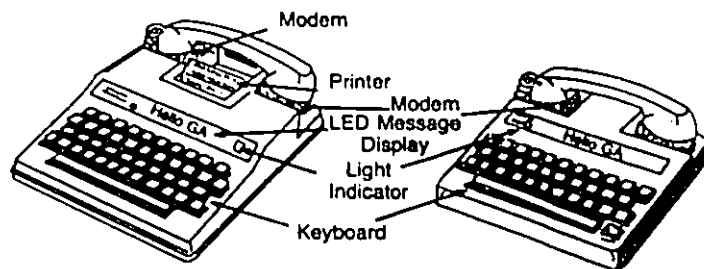
TDD With Built-in Printer

TDD Without Printer

TDD TDD TDD TDD TDD
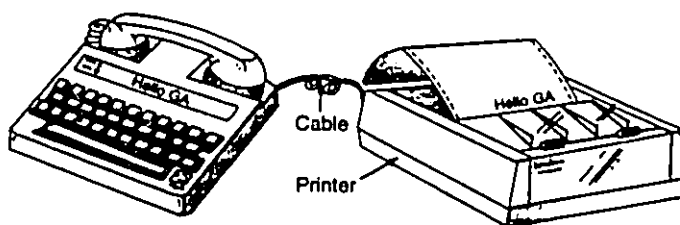
Cable

Printer

TDD With Printer Cabled-in

TDD TDD TDD TDD TDD TDD TDD TDD TDD TDD

Cable
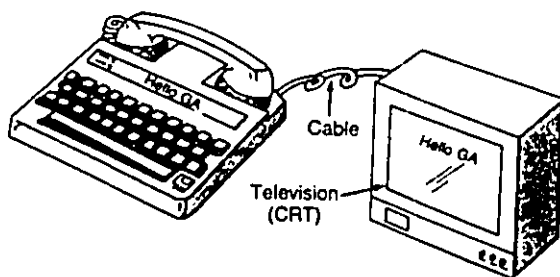
Television (CRT)

TDD With Television Cabled-in

Developed and Produced by the:

National Association
For Hearing And
Speech Action

10801 Rockville Pike
Rockville, Maryland 20852

Q ....As in HOW ARE U Q GA.

U ....You. As in THANK U.

UR ....Your. As in UR MESSAGE IS UNCLEAR.

HD ....Hold. You are being asked to wait or hold on.

PLS ....Please. As in PLS HD.

XX/XXX ....You are telling the person that the word is misspelled or incorrect.

OIC ....Oh, I See. Rarely used.

CUL ....See You Later. Rarely used.

TDD Etiquette

TDD users who are deaf or hearing impaired cannot identify persons with whom they are communicating by recognizing their voices. Therefore, it is important that the following guidelines be used to facilitate the same kind of "personal" touch as that communicated by the voice.

Recognizing a TDD Call

If you have one telephone number for both voice and TDD calls, you must be able to identify which means of communication the caller wants to use. If you have a number for TDD calls only, then identification of the type of call is not a problem.

With the older TDD models such as TTYs, you can easily recognize a TTY call since the machine of the caller creates a lot of mechanical noises. However, it is difficult to recognize modern TDDs because they are so quiet. All TDDs and TTYs do have some indication, such as a blinking light, that a call is being sent or received. The TDD/TTY will also indicate that a telephone line is busy. However, once in awhile extra noises are created on telephone lines or by TDDs themselves that cause confusion. So, it is important to have other means for recognizing a call as voice or TDD.

When you answer a call, it is important that you respond quickly and appropriately. If you answer orally and no oral answer comes across, place the telephone handset on the TDD coupler immediately and answer the call by typing greetings, your name, etc.

If you place the handset on the coupler and no typing response comes across the screen, then pick up the handset immediately and answer again orally. Listen carefully to decide if it is a TDD or a voice call. You may be able to hear TDD signals, such as high pitched sounds. If you do, place the handset on the coupler immediately and answer the call. If you do not hear TDD signals, pick up the handset and answer orally.

If you have a telephone with an amplifier, you must have the amplifier turned low or off when you place the handset on the TDD. Having the amplifier on high will interfere with sending and receiving TDD messages.

If you cannot hear, you will need to rely on the TDD's light indicator. The indicator shows long and steady signals when a phone is being rung. If the line is busy, the indicator will show short and steady signals. The signals for a ringing phone are longer than for a busy line.

When the indicator shows irregular signals, the person on the line is usually answering by voice and does not have a TDD available at the moment. You may either call again, or call a third party operator to relay your message to the person called. Sometimes when you dial a telephone number, you might receive a recorded verbal message. In these cases, the light indicator on the TDD will also produce irregular signals.

When a TDD call is answered orally, the caller may sometimes type letter keys or use the space bar to send TDD signals and indicate that the call is TDD, not voice. Since TDD signals are high pitched sounds, they may harm the listener's hearing. Therefore, this practice is recommended only for emergency calls such as dialing 911. For these calls, the space bar or letter keys *must* be used to help the listener respond quickly and answer the call with a TDD.

It does take a longer time to answer a TDD call than a voice call. While a short time lapse between answering the call and typing a greeting is acceptable, a long pause is inappropriate.

Sending and Receiving the Message

Just as for voice calls, it is important to identify yourself or your residence, title, department, organization, etc., when using a TDD. Of course, greetings are always used. For example:

GOOD MORNING THIS IS JANE AT NATIONAL ASSOCIATION FOR HEARING AND SPEECH ACTION MAY I HELP U Q GA or HELLO JANE ACCOUNTING DEPT HERE GA or

HI JANE DOE HERE GA.

Almost all TDD and TYY letters are capitalized.

There is no need to use punctuation in your messages. Use it once in a while to specify information you want to send clearly like names, addresses, numbers, etc. Also, there is no need to type complete and standard English sentences. You may omit words that do not contribute to the message's meaning such as articles, some prepositions, etc. This practice helps speed up the rate of communication since typing and reading take more time than talking and listening. This procedure is especially helpful for long distance calls and reduces the telephone bill. Use the special TDD abbreviations listed above, common English abbreviations, and short messages whenever possible.

If you happen to misspell a word or name, or make a mistake, just type double or triple X's after the misspelled word:
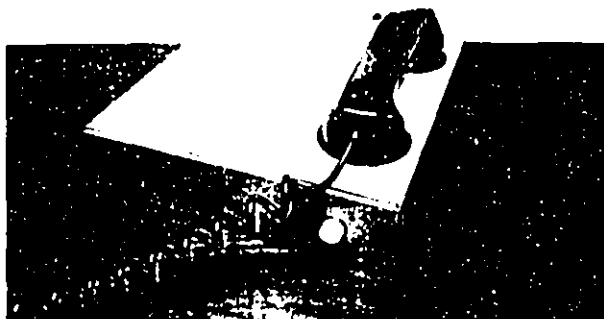
NATNNNNLOXX NATIONAL   ATNNXXX ASSOCIATION.

What You Should Know About TDDs

By Diane L. Castle, Ph.D.

letters TDD. This plan makes it possible to find TDD numbers in the standard directory.

An acoustic coupler allows the TDD to send and receive typed messages through standard telephone lines. If your TDD does not have a built-in coupler, you need a separate coupler. Order it from your TDI representative or directly from a company that sells couplers.

Most deaf people need a light attached to the telephone to let them know when the telephone is ringing. You can order a signal light from the telephone company when you have your telephone installed. The telephone company will charge a monthly rental for the signal light. This cost will be listed on your telephone bill. You may prefer to buy a signal light from one of several different companies, from a hearing aid dealer, or from your TDI representative. For more information about signaling devices, write for a free copy of **Signaling Devices for the Hearing Impaired**, available from the Alexander Graham Bell Association for the Deaf, 3417 Volta Place N.W., Washington, DC 20007.

Troubleshooting

TDD calls usually go smoothly, but sometimes problems do occur. It is frustrating to continue a TDD call when the printed message is mixed up. If you understand how different problems can occur, perhaps you will be able to prevent them.

Problem: Using the wrong handset

The older, reconditioned TDD equipment requires a 500 series telephone handset. The 500 series handset has a magnetic conductive microphone. The magnetic microphone gives the strongest transmission of the tones through the telephone. If you are using the wrong telephone handset, you may get a confused message (scrambled letters and numbers). However, some of the

new portable TDDs will transmit typed messages through any style telephone handset.
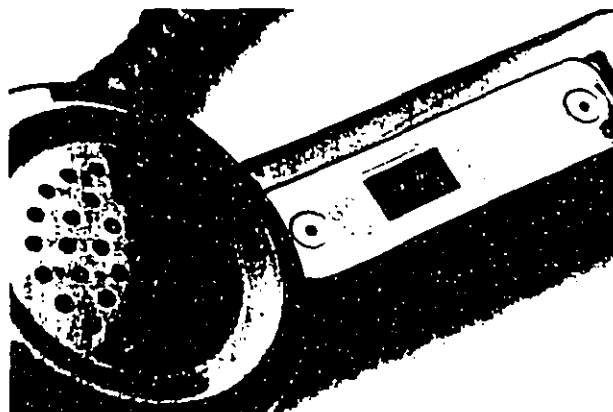
Problem: The amplifier is not on zero

If you have a volume control dial (amplifier) on your telephone, be sure the amplifier is set on zero. If the amplifier volume is turned higher, you can pick up other sounds in the room which will put extra letters and numbers in your message.

Problem: A bad connection

A bad connection can affect the transmission of sound through the telephone. A bad connection can occur when you talk or type over the phone. If you have a bad connection, your TDD conversation may be confused with extra letters and numbers. You should be able to get a better connection if you hang up and dial again. Before you hang up, explain to the other person that you cannot understand their message. Tell the person that you will call back immediately, or ask the other person to call you back immediately.

Problem: An old coupler

Many old couplers, purchased for reconditioned equipment, may no longer work correctly. For technical reasons, the coupler does not transmit the TDD code accurately. Therefore, the message is not received clearly. Often, the coupler can't be repaired and the best solution is to buy a new coupler.

Problem: The person did not shift back to letters after using numbers

Like a typewriter, the TDD has a shift key on each side of the keyboard. On the TDD keyboard, these keys may be labeled shift (SHIFT), or figures (FIGS) and letters (LTRS). Press the key to type numbers or characters

printed on the upper part of the key. On some TDDs you must press the key again to change back to letters. Sometimes the person sending the message will forget to press the shift or letters key after using numbers in the message. The message from that point on is a confusion of numbers and punctuation marks. If this happens, explain the problem and tell the person to press the shift or letters key. Sometimes you can press the shift key on your TDD to clear up some of the confused message.
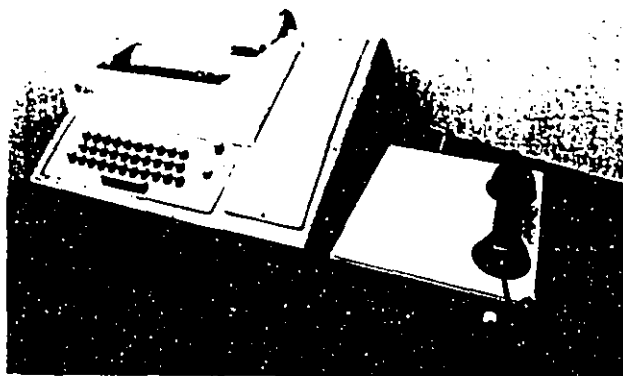
Problem: The mechanical TDD did not start at the left margin

Both people, the caller and the answerer, should begin typing at the left-hand side of the paper or display area. If both people do not begin at the left margin, the letters on one TDD may print on top of each other. For example, one TDD begins at the left-hand margin and another TDD begins at the middle of the line. The TDD starting in the middle of the line will reach the end of the line first. The letters will be printed on top of each other. Before starting a conversation, press the line feed/return keys to be sure you are starting at the left margin.

Problem: The person did not press the line feed/return keys at the end of each line

If you are using a mechanical TDD that requires using the line feed/return keys, you must press line feed/return at the end of each line. Sometimes a person sending the message forgets to press the line feed/return keys at the end of the line. The person receiving the message sees each letter printing on top of the last one. The person receiving the message can quickly press the line feed/return keys to save some of the message from piling up at the end of the line. However, it is the responsibility of the person sending the message to press the line feed/return keys.

Problem: Using a backspace key when both TDDs don't have it

Several of the electronic TDDs have a backspace key. This key can be used instead of typing **XX** for a spelling mistake. However, both people need to use a TDD that has the backspace key. Otherwise the message is confused.
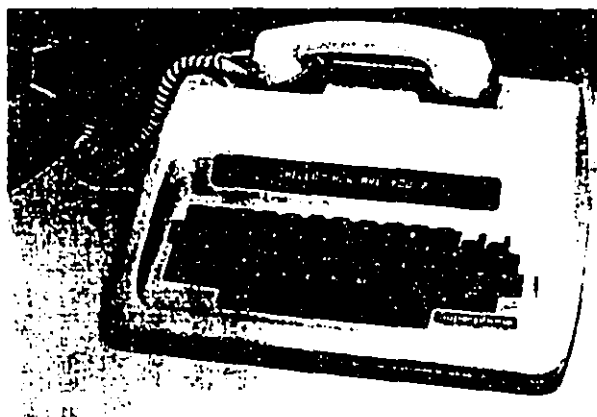
A New Trend: The Superphone

New TDDs have many fine features you may find attractive. Before you buy a TDD, be sure you are up-to-date on the many new features available today. For example, many TDDs now have one key that can be used to type **GA, SK, or XX.** As an example of the new electronics currently being built into TDDs, consider one very interesting TDD, called the Superphone. Ultratec, Inc. introduced this TDD product that can be used to call any hearing person—and the hearing person doesn't even need a TDD. That means any deaf person can call a doctor, a hospital, the police, or fire department in an emergency without needing a TDD on the receiving end. Here are two of its features, as described in the company's literature. (We're not making claims...only passing the information along to you.)

Voice Output

The Superphone can be made with an optional electronic voice. This voice sounds like a person talking. When words are typed by the deaf person on the Superphone, the words are spoken into the telephone by the electronic voice. Using this special TDD, a deaf person who cannot use his speech can call a hearing person and type a message on the Superphone. The message is spoken into the telephone by the electronic voice. The hearing person listens to the message. When it is the hearing person's turn to talk, the hearing person

KRI Communications, Inc.

3303 Harbor Boulevard., Suite D7, Costa Mesa, CA 92626
~~(714) 540-7777~~ V/TTY • Fax. (714) 540-7747
(818) 330-5482

RETAIL PRICE LIST

ITEM SERIES * MODELS		RETAIL
PORTAVIEW SERIES		
PV20	Standard (Junior PV20JR)	$239.
PV20D	Direct (Senior)	$269.
PV20+	Plus (memory)	$339.
PV20+A	Plus, Ascii	$419.
PORTA PRINTER SERIES		
PP2000	Standard	$359.
PP2000D	Direct	$399.
MEMORY PRINTER SERIES		
MP20	Standard	$475.
MP20C	Standard, Clock	$525.
MP20A	Standard, Ascii	$555.
MP20AC	Standard, Ascii, Clock	$599.
MP20D	Direct	$525.
MP20DC	Direct, Clock	$575.
MP20DA	Direct, Ascii	$605.
MP20DAC	Direct, Ascii, Clock	$655.
MP20DX	Light/Direct	$569.
MP20DXC	Light/Direct, Clock	$599.
MP20DXA	Light/Direct, Ascii	$649.
MP20DXAC	Light/Direct, Ascii, Clock	$699.
PUBLIC PHONE SERIES		
PayPh-MI	Acoustic	$775.
PayPh-MII	Direct Tip/Ring	$875.
ACCESSORIES (Add Ship/Handling only if not ordering TDD)		
DUST COVER (PV20/PP2000/MP20)		$ 12.00
CARRYING CASE * SOFT VINYL ("/"/")		$ 24.00
SQUARE HANDSET ACOUSTIC COUPLER (pair)		$ 20.00
EXTRA/SPARE (Specify TDD Model/Serial/Date)		
ADAPTOR (specify 48-C, 48DT-7, or Other)		$ 15.00
BATTERIES		$ 20.00
BATTERIES WITH COVER		$ 22.00
INSTRUCTION MANUAL		$ 7.50
PAPER * 6 ROLLS/PKG 2-1/4", 2-3/8"		$ 12.00
SHIPPING/HANDLING		
TDD * PV/PP/MP w/added accessories	each	$ 12.50
TDD * PayPh	each	$ 15.00
Adaptor/Batteries/Carry Case	each	$ 3.50
DustCover/Sq.Coupler/Manual/Paper	each	$ 2.50

NOTES:

TEXT TELEPHONE (TDD/TTY) prices include Unit, Adaptor, Instructions.
PRINTING models also include 2 rolls of paper.
PRICE BREAK over 10 each/line - please call Sales Department.
PURCHASE ORDERS: "$100 Minimum Buy" for approved accounts only.
STATE SALES TAX for California and Virginia.
SEND "Check" or "Money-Order" payable to "KRI Communications Inc".

DELUXE MEMORY PRINTER
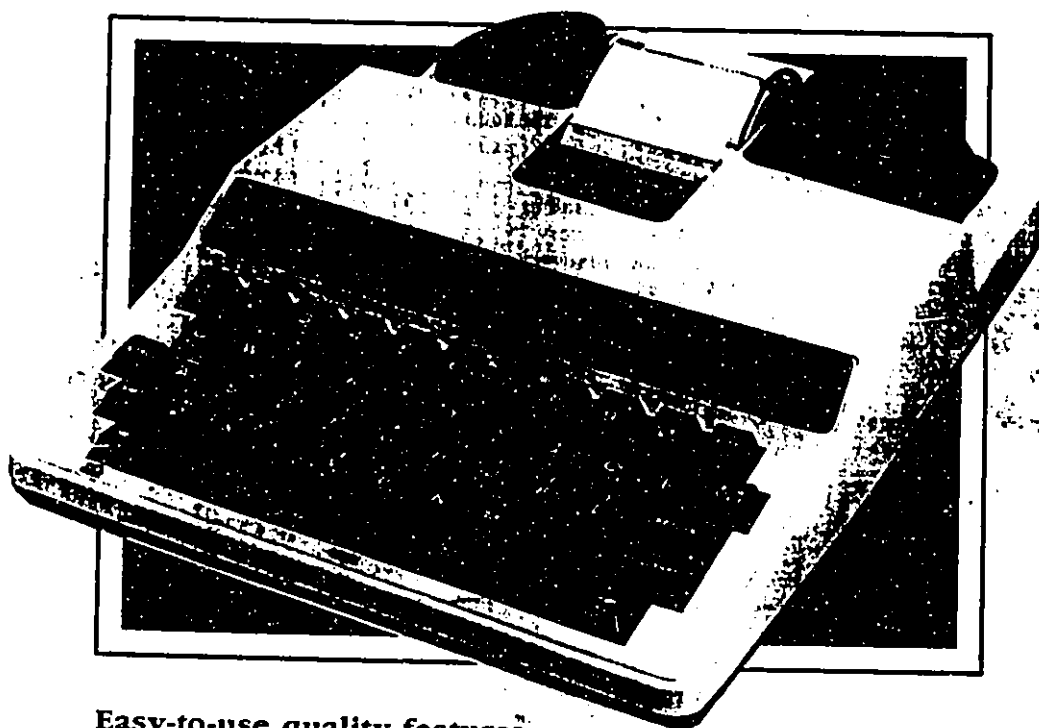
Easy-to-use quality features
from the industry pioneer,
Krown Research, make the
Memory Printer the world's
favorite printing TDD.*

Krown Research
KRI Communications, Inc.

*Telecommunication Devices for the Deaf

Krown Research

The Memory Printer MP series offers the finest in modern TDD* technology, ensuring the most reliable text-telephone communications available today.

Since 1975, Krown Research has consistently provided the deaf and hard-of-hearing with the highest quality, most technologically advanced TDDs we can build and offer at affordable prices. Krown quality is the standard for the TDD industry. Just compare these impressive features.

MEMORY PRINTER MP20

- 20-column display
- 20-column printer provides condensed and wide printing
- 8,192-character memory
- 4 message buffers
- Upper/lower case printing (separates incoming and outgoing messages)
- Replaceable heavy-duty rechargeable battery (1½ hours per charge)
- International speed
- Acoustic cups accommodate both square and round handsets
- Electronic voice
- 1-year warranty
- Optional: ASCII code modem
    Dust cover
    Carrying case

MEMORY PRINTER MP20D

Includes standard features of the MP20 as well as the following:
- Keyboard dialing
- Memory dialing
- Tone/pulse dialing
- Built-in directory
- Dual modular jacks
- Auto answer
- Remote message retrieval
- Optional: ASCII code modem
    Clock/Calendar
    Dust cover
    Carrying case

MEMORY PRINTER MP20DX

Includes standard features of the MP20D as well as the following:
- Built-in flashing strobe signaler alerts the hearing-impaired caller that the phone is ringing
- Optional: ASCII code modem
    Clock/Calendar
    Dust cover
    Carrying case

SAMPLE PRINTOUT (ACTUAL SIZE)

```
WOW! LOOK AT
THIS...
BIG LETTERS
FOR EASY
READING.
PLUS NORMAL PRINT
AND CONDENSED PRINT...
ALL WITH THE
SAME TDD.
NEW AND
INNOVATIVE
FROM KROWN
RESEARCH!
```

SPECIFICATIONS

Multi-Wide™ Printer
- 20-column thermal printer
- Select 20, 24 or even 12 Extra Large characters on a printed line
- Receive characters printed in upper case
- Transmit characters printed in lower case
- 2¼" (57 mm) wide paper

Display
- 20-character
- Blue/green vacuum fluorescent
- 5.5 mm character height

Communications
- Baudot code, 45.5 Baud
- 1 start bit, 5 data bits, 1.5 stop bits

ASCII Code Modem
- Computer Code — Bell 103 Modem
- 110 and 300 Baud
- Half/Full duplex
- Answer/Originate

Power Supply
- Heavy duty AC adapter
- UL/CSA listed

Physical Dimensions
- Size: W 9.5" (24.2 cm)
    L 12.5" (32.5 cm)
    H 2.75" (7 cm)
- Weight: 5.75 lbs. (2.6 kg) with batteries

FOR MORE INFORMATION, CONTACT

The Krown Research Family of TTYs*

Compare Our Outstanding Features...

Krown Research — KRI Communications, Inc.

THE PORTA-PRINTER COMPANY*

Feature	PORTA VIEW JR. PV20	PORTA VIEW SR. PV20D	PORTA VIEW PLUS PV20+	PORTA PRINTER 1000, PP2000	PORTA PRINTER 1000D, PP2000D	MEMORY PRINTER MP20	MEMORY PRINTER MP20D
PC-style keyboard	•	•	•	•	•	•	•
20-character fluorescent display screen	•	•	•	•	•	•	•
Automatic signal sensitivity adjustment	•	•	•	•	•	•	•
Phone indicator light	•	•	•	•	•	•	•
Flexible cups for round/square handsets	•	•	•	•	•	•	•
Heavy-duty rechargeable batteries	•	•	•	•	•	•	•
AC adaptor/charger	•	•	•	•	•	•	•
Low battery indicator	•	•	•	•	•	•	•
Standard/international transmission rates		•	•	•	•	•	•
External printer port		•	•				
Built-in multi-wide printer* w/ normal, condensed & extra large print				•	•	•	•
Direct telephone line connection		•	•		•		•
Automatic answering system		•	•		•		•
Keyboard dialing		•	•		•		•
Memory dialing			•				•
Tone/pulse dialing			•		•		•
8K memory			•			•	•
TTY call alert tones				•	•		
Electronic voice announcer			•	•	•	•	•
Built-in help menu				•	•	•	•
Call progress display screen					•		
Built-in flashing strobe signaller option							•
Dual modular jacks					•		•
Auto redial					•		
Time/date stamp option							•
ASCII option			•			•	•

*Text Telephones

SO MUCH MORE TTY FOR YOUR MONEY,
WHY SETTLE FOR ANYTHING LESS.

FEATURES AND BENEFITS	DIALOGUE MODEL					
	I	I-P	II	II-P	III	III-P

OPTIONAL FEATURES

GENERAL SPECIFICATIONS

Patents Pending

ameriphone ®
Helping People Communicate Easier

7231 Garden Grove Blvd., Suite E-F
Garden Grove, CA 92641-4219

(800) 772-2TTY (TTY/TDD)
(800) 874-3005 (Voice)
FAX 714-897-4703

Available from

AMERIPHONE SPORTS NEW "LOOK"

Joining the ranks as a *"global marketer"*, AMERIPHONE recently unveiled its new logo. The new logo design was inspired by the company's leadership role in telecommunications and the special market needs it strives to serve on a worldwide basis.

Mr. George Cheung, Executive Vice President, used the occasion of the introduction of the company's new DIALOGUE VCO phone to officially launch the new logo. *"The new logo is exciting, progressive, dynamic and global"*. *"It reflects very well who we are, what we do and where we want to go"*, said Mr. Cheung at a company wide special meeting.

"HELLO DOTTY! ". . . .

(Excerpts from Otto Menzel's "The Canny Consumer", LIFE AFTER DEAFNESS MAGAZINE, August, 1994).

Mr. Otto Menzel, Editor-in-Chief of LIFE AFTER DEAFNESS Magazine, requested to personally evaluate the new AMERIPHONE DIALOGUE VCO which he calls "DOTTY" which is an acronym for a " Display only TTY".

Mr. Menzel writes "AMERIPHONE's "DOTTY" has a screen to display incoming TTY text, much like any TTY, but it has NO KEYBOARD, just the dial

AMERIPHONE INTRODUCES ADVANCED " READ & TALK" DIALOGUE VCO PHONE

RECEIVED SEP 1 2 1994 COMMISSION ON DEAF & HARD OF HEARING

AMERIPHONE introduced its newest DIALOGUE product, the AMERIPHONE DIALOGUE VCO (voice carry over) telephone. This "display" phone makes VCO calls easy and enjoyable. Calls can be made and received without typing on a keyboard. Even dialing a number is automatic.

The DIALOGUE VCO allows people who are hard-of-hearing or deaf to communicate with people who use a standard telephone via the local relay service. In a voice carry over call, the VCO user talks directly to the person on the line. The response appears as text on the DIALOGUE screen. You simply read and talk, without typing.

A programmable relay number button and a VCO call request message button make dialing the local relay operator and placing your call automatic. The phone features automatic voice carry over switching to make conversations smooth and more natural. There's no need to keep
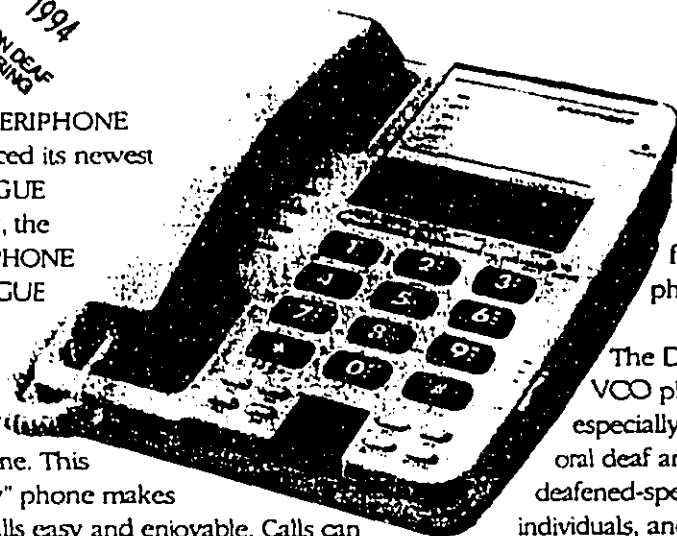
moving the handset back and forth to the phone.

The DIALOGUE VCO phone is especially designed for oral deaf and late deafened-speaking individuals, and also for seniors with hearing loss.

For deaf individuals, the DIALOGUE VCO's bright ring flasher is sensibly located for easy viewing. A large character two line display screen makes reading incoming text messages easy. With its backlighted screen, and high contrast bold letters, text is easy to read in daylight or at night.

For seniors and others with hearing loss, a loud tone ringer adjustable up to 85 dB clearly alerts you to incoming calls. The phone also includes an adjustable amplifier to raise incoming call volume to 20 decibels. And a booster button adds an extra 10 dB for even louder and clearer incoming voice level. The DIALOGUE VCO includes a built in automatic text message answering machine to record TTY

Uniphone Series

Uniphone 1100

Combination telephone and TTY for home use, ideal for students, hospital patients and hotel guests.

Uniphone 1100 and 1000:
- Telephone handset with volume control (20dB gain)
- Special convenient keys: Dial key, GA key, Volume control key, TTY on-off key
- Direct connect
- Keyboard dialing, follow-on dialing
- Call progress (display says "ringing" or "busy")
- Auto ID™
- Turbo Code™
- 2-line, 2 x 24-character LCD display
- Baudot code (45.5 baud)
- One-year limited warranty
- U.L. Listed

Uniphone 1100 also features:
- 8k memory
- Built-in ring flasher
- Pre-programmed auto-answer message
- Display with backlight

Available Option:
- Extended warranty
  1yr #O/EXUP..........$35.00
  2yr #O/2EXUP........$70.00

The Uniphone 1100 and 1000 are combination TTYs and standard telephones with volume control, including Voice-Carry-Over (VCO) and Hearing-Carry-Over (HCO) capabilities. Now individuals who are deaf, hard of hearing, or hearing can share a single telephone, eliminating the need of having a separate TTY and telephone. As a telephone, the Uniphone has volume control giving you an amplified handset which can benefit both people who are hard of hearing and hearing. A special timer allows you to keep track of your conversations.

The Uniphone is an integrated telephone and TTY. Its convenient VCO and HCO features can be used when calling through a relay service.

The Uniphone incorporates Turbo Code for quick information transfer. When two TTYs are equipped with Turbo Code, you can transmit information as fast as you can type. The Auto ID feature alerts hearing people that you are calling from a TTY.

The Uniphone 1100, with auto answer capability, features 8k memory for storing conversations, auto-answer messages, and a personal greeting. The outgoing auto-answer message is pre-programmed for your convenience. It has a built-in ring flasher, alerting you to incoming calls.

#T/UN1100....$279.00
#T/UN1000....$229.00

Compact

Pocket-sized, personal TTY to carry in purse, briefcase, or backpack.

The pocket-sized Compact TTY gives you telephone accessibility everywhere you go. It is a full-featured TTY that is designed to fit in your purse, pocket, or briefcase. The 8k memory stores your TTY conversations, messages, and important phone numbers. The 80-character, 2-line display allows you to read the conversation

with ease. You can also relax knowing the rechargeable batteries will last 7-10 hours. Now you can have access to the telephone wherever you go — just take along your Compact TTY!

#T/COMPACT....$299.00 *(remember to indicate color when ordering — blue, pink, or gray)*

- 2-line, 80-character LCD display with backlight
- 57-key, 4-row keyboard with easy-touch keys
  8k memory saves and sends messages, stores phone numbers, and stores TTY conversations
- TDD Announcer™
- Long-lasting, rechargeable batteries (7-10 hrs) and AC adapter included
- Keyboard colors: blue, pink, or gray
- Built-in, real-time clock and date functions
- Baudot code (45.5 baud)
- E.A.R.S.™ (sensitivity)
- Size: 8.8" x 3.9" x 1.2"
- One-year limited warranty
- U.L. Listed

Available Options:
- Option package: ASCII code and 32k memory #O/COMPASC $60.00
- Extended warranty
  1yr #O/EXCP $40.00
  2yr #O/2EXCP $80.00
- Soft carrying case #O/CPC....................$16.95

Miniprint Series

Miniprint 420 only

Miniprint 220 and 420:
- Built-in, 24-character printer
- 3 selectable print sizes
- Auto ID™
- Turbo Code™
- Baudot code (45.5 baud)
- E.A.R.S.™ (sensitivity)
- PC-style layout
- Sticky key (for single-handed typing)
- One-year warranty
- U.L. Listed

Miniprint 420 also features:
- Direct connect with 2 jacks
- Auto-answer
- Pre-programmed auto-answer message
- Selectable number of rings for auto-answer
- Keyboard dialing, follow-on dialing
- Tone or pulse dial
- Call progress (says "ringing" or "busy")
- Built-in ring flasher*

Available Options:
- Extended warranty
  1yr #O/EXMP $45.00
  2yr #O/2EXMP $90.00
- Dust cover #O/DUSTCOV...............$7.95
- Soft carrying case #O/CARRY...................$19.95
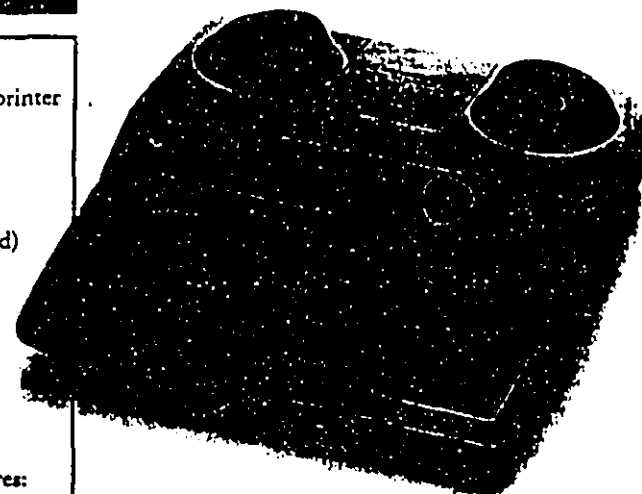
Basic printing TTY for home or office.

The Miniprint 220 and 420 are easy-to-use, basic printing TTYs. They each feature Turbo Code™ and Auto ID™. When two units are Turbo-equipped, you can transmit information as fast as you can type, and it is possible to interrupt one another. Auto ID sends alerting signals to help hearing people identify incoming TTY calls.

The Miniprint 420 features direct connect with two telephone jacks and a pre-programmed auto-answer message for your convenience.

While in direct connect the Miniprint 420's built-in ring flasher indicates you have an incoming call.

#T/MP220...$379.00
#T/MP420...$419.00

Superprint 4420
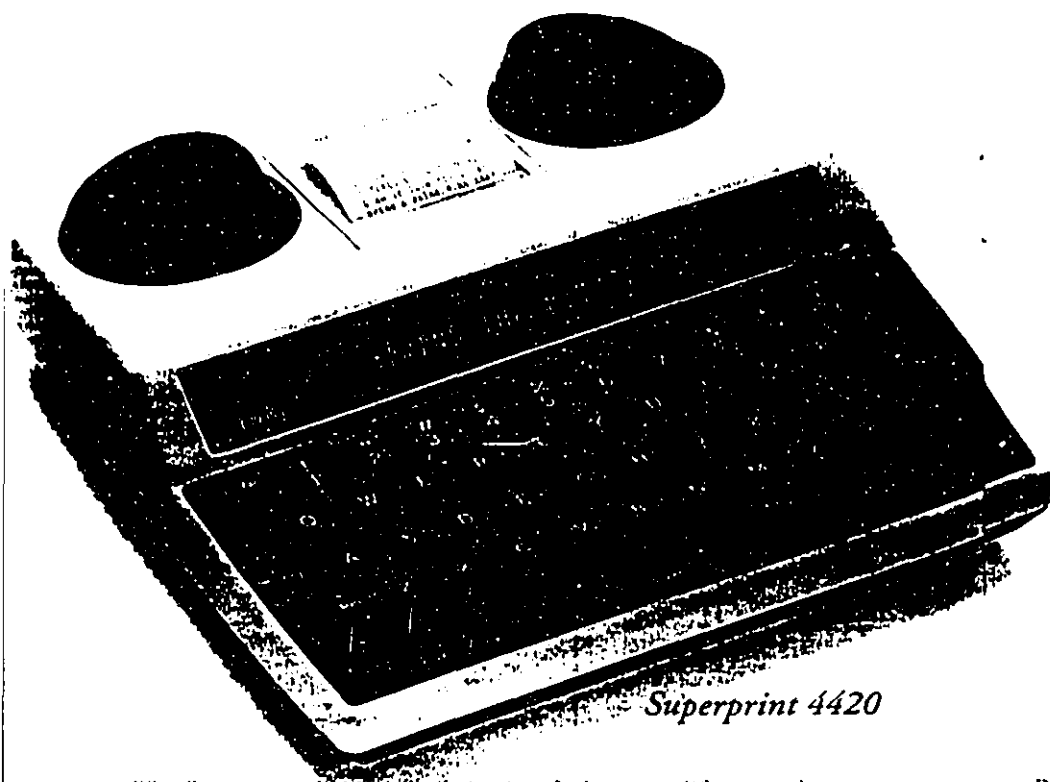
Superprint 4420

Advanced printing TTY for home, office, hospital information, and hotel front desk.

FEATURES

- Built-in, 24-character printer
- 3 selectable print sizes
- 32k memory
- Date/time printed at the beginning of each call and auto-answer message
- Turbo Code™
- Auto ID™
- User-programmable Relay Voice Announcer
- Direct connect with 2 phone jacks
- Built-in ring flasher
- Call progress
- Auto-answer capabilities
- Automatically answer calls with personal message
- Remote message retrieval
- Tone or pulse dial
- Keyboard dialing, Follow-on dialing
- Memory dialing/re-dial
- TDD Announcer™
- E.A.R.S.™ (sensitivity)
- Baudot code (45.5 baud)
- Sticky key (for single-handed typing)
- One-year limited warranty
- U.L. Listed

The Superprint 4420 is an advanced printing TTY that offers features you've never had before. When in direct connect, the display spells out "ringing" or "busy" after a number is dialed to show you the status of your call. Two direct connect jacks make it easy to connect the phone and TTY to the telephone line. The built-in ring flasher alerts you to incoming calls.

Turbo Code lets you communicate at speeds as fast as you can type with other TTYs that have Turbo Code. Auto ID automatically sends TTY tones to alert the answering party that there is a TTY call. This feature could be a lifesaver when you are placing an emergency call.

The Superprint 4420 has 32k memory so you can name and save conversations, memos, outgoing messages, and telephone numbers. Named memos are a great convenience. Just touch a few keys and your personalized message is sent.

Pre-programming telephone numbers enables you to type a name, and the number is automatically dialed.

The user-programmable Relay Voice Announcer is another unique feature of the Superprint 4420. When a hearing person calls, the Superprint 4420 can send a voice message letting them know they have reached a TTY. This message directs the hearing party to call using a relay service, and lists the phone number for your state's relay service.

Take advantage of features you've never had before with the Superprint 4420.

#T/SP4420....499.00

Superprint Series

Printing TTY for home or office use.

The Superprint Series features the Superprint 200 and Superprint 400, which are easy-to-use, printing TTYs. These TTYs include a 24-character printer and an 8k memory with nine message buffers to save and send messages.

The Superprint 400 also offers auto-answer and remote message retrieval for your busy lifestyle. The Superprint 400 answers your phone and takes TTY

messages for you while you're away. You can call in and read your messages with remote message retrieval. The memory also gives you access to your most important phone numbers by storing up to 26 different numbers.

The Superprint Series is built to last, bringing you the best in printing communications.

#T/SP200.....$479.00
#T/SP400.....$529.00

FEATURES

Superprint 200 and 400:
- 24-character printer
- 8k memory
- 9 message buffers to save and send messages
- Hard cover for travel
- TDD Announcer™
- E.A.R.S. (sensitivity)
- Baudot code (45.5 baud)
- One-year limited warranty
- U.L. Listed

Superprint 400 also features:
- Direct connect
- Auto-answer
- Keyboard dialing
- Memory dialing
- Stores up to 26 different phone numbers
- Remote message retrieval

Available Options:
- ASCII code
  #O/SPASC.............$49.95
- Extended warranty
  1yr #O/EXSP.............$45.00
  2yr #O/2EXSP.............$90.00
- Heavy duty batteries
  #O/BATTS.................$25.00
- Dust cover
  #O/SDUSTCOV.............$9.95
- Soft carrying case
  #O/SCARRY.................$29.95

Supercom

FEATURES

- Direct connect
- Auto-answer
- 8k memory to save and send messages, store TTY conversations and up to 10 phone numbers. Also stores and sends your personal auto-answer message
- Rechargeable batteries and AC adapter included
- Printer port to connect to your external printer
- Remote message retrieval
- Keyboard dialing, memory dialing, and redialing
- TDD Announcer™
- Baudot code (45.5 baud)
- E.A.R.S.™ (sensitivity)
- 20-character display
- One-year limited warranty
- U.L. Listed

Available Options:
- ASCII code
  #O/SCASC.................$49.95
- Extended warranty
  1yr #O/EXSC...........$40.00
  2yr #O/2EXSC.........$80.00
- Soft carrying case
  #O/CARRY.............$19.95
- Dust cover
  #O/DUSTCOV $7.95
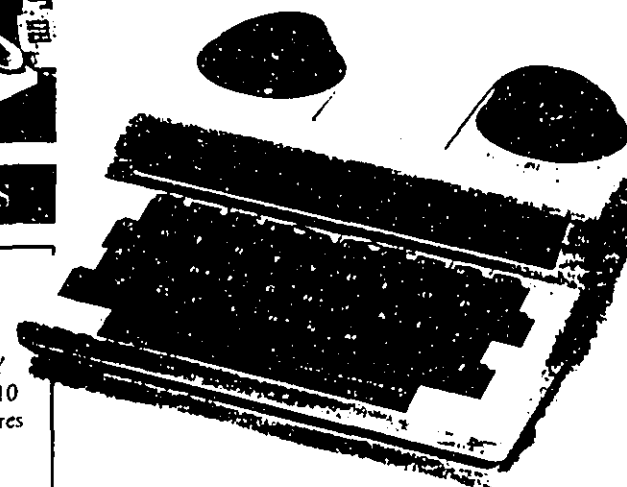
Full-featured TTY with printing option for more convenient home use, also for hospital patients and hotel guests.

Supercom is a full-featured TTY with a printer port to connect to your external printer. It has advanced features that include memory, direct connect, auto-answer, and remote message retrieval. The 8k memory will save and send messages, store TTY conversations and phone numbers. You can also resend messages and

conversations stored in the memory. It also includes the TDD Announcer™, which is a voice that alerts hearing people to your calls. If you want a desktop TTY with advanced features, you'll want a Supercom.

#T/SC..........$329.00

Superprint ES

Printing TTY for emergency services.
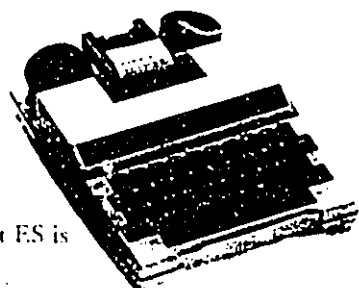
The Superprint ES is designed for emergency services personnel who receive TTY phone calls from people who are deaf or hard of hearing. The Superprint ES was developed with input from experts on emergency service communications.

It includes a built-in, 24-character printer to keep a record of the call, printing the date and time at the beginning of each call, and both Baudot and ASCII code.

#T/SPES......$650.00

TDD Detector

Helps detect and identify incoming TTY calls, for emergency service providers and other agencies.
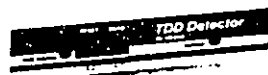
The TDD Detector will alert your agency to emergency TTY calls from people who are deaf or hard of hearing. It will help your telephone

operators identify TTY calls faster and with greater accuracy. The TDD Detector monitors the phone line, listening for TTY characters.

#U/TDET.....$399.00

Back panel

Intele-Modem

Turns your computer into a TTY.

The Intele-Modem can turn your personal computer into a TTY. It automatically switches between ASCII computer code and Baudot TTY code, allowing you to communicate with people using various types of TTYs and computers. It directly connects to your phone line and detects dial tones, rings, or busy signals. The Intele-Modem works with standard communications software.

#U/IM.........$329.00

Supplies and Other Items

- AA rechargeable batteries (sold individually)
  #O/AABATTS..$3.00

- 2¼" printer paper for Superprint and Miniprint (3 rolls)
  #O/PAPER...$5.10

- Square cup adapters
  #O/SQCUP..$20.00

- Telephone Y jack (duplex jack)
  #O/YJACK...$4.95

- Printer cable for external printer:
  - Minicom IV/Supercom
  #O/MCC...$29.00
  - Uniphone 1100
  #O/UNC...$29.00
  - Superprint 200/400
  #O/SPC...$29.00
  - Superprint 4420
  #O/SP4420C..$29.00

- Replacement Power Adapters:
  - Compact and Uniphone
  #O/CPPOWER..$8.00
  - All other TTYs
  #O/MPPOWER...$8.00

TELCOM INTERNATIONAL
28302 Industrial Blvd.
Suite H
HAYWARD, CA 94545

(510) 785-4000 Voice/TTY

DATE	INVOICE NC
6 Apr 94	5858

BILL TO.

KY Commission on the Deaf &
Hard Of Hearing
134 Brighton Park Blvd
Frankfort, KY 40601

SHIP TO:

KY Commission On The Deaf &
Hard Of Hearing
134 Brighton Park Blvd
Frankfort, KY 40601

P.O. NUMBER	TERMS	REP.	SHIP	VIA	F.O.B.	PROJECT
Fax	N/A	MM 6	Apr 94	UPS	DEST	TeleView TV-80

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
1	TV-80	TeleView Model-80 (Standard)	429.00	429.00
1	TP-11	Thermal Paper-Black (4 Rolls), Size 4-1/4	12.00	12.00
	Shp	Shipping and Handling	7.00	7.00

APR 2 5 1994

	TOTAL	448.00

BALANCE DUE:	448.00

Model-80

Printer:
47/40/24 Column multi-wide printer.
Receive characters in UPPER CASE
Transmit characters in lower case
Paper size 4.25" wide thermal paper

Built in Voice Announcement:
It has a built-in unchallengeable voice
message. It is used for calling hearing
person with the Voice/TDD number.

Built in International Speed:
It has two different speeds. one is the
American speed and other is the
European standard. In case you travel or
call over seas, Just press a button and
you will be on your way.

Memory:
32K (32,766 characters) memory:
  a) 3 Transmit buffers (1K for each
     buffer)
  b) 2 user programmable, auto-
     answering units with outgoing
     messages (Model 40T/40TDD)

Remote Message Retrieval:
Now you can call your TeleView to find out any
messages for you. Whether at the office or
traveling the world, just type your password
and your on your message.(Mode 40T/40TDD)

Communications:
Baudot code, 45.5 Baud (60 word per
min.).
1start bit, 5 Data bits, 1.5 Stop bits.

Power:
UL Listed AC charger/adapter.
Ni-cad rechargeable battery

Physical Dimensions:
Size: l. 13.0" X W. 10.0" X H. 2.5"

Telcom
Telcom International.
383 Beach Road
Burlingame, CA 94010
(415)343-3000 Voice/TDD

Made In USA
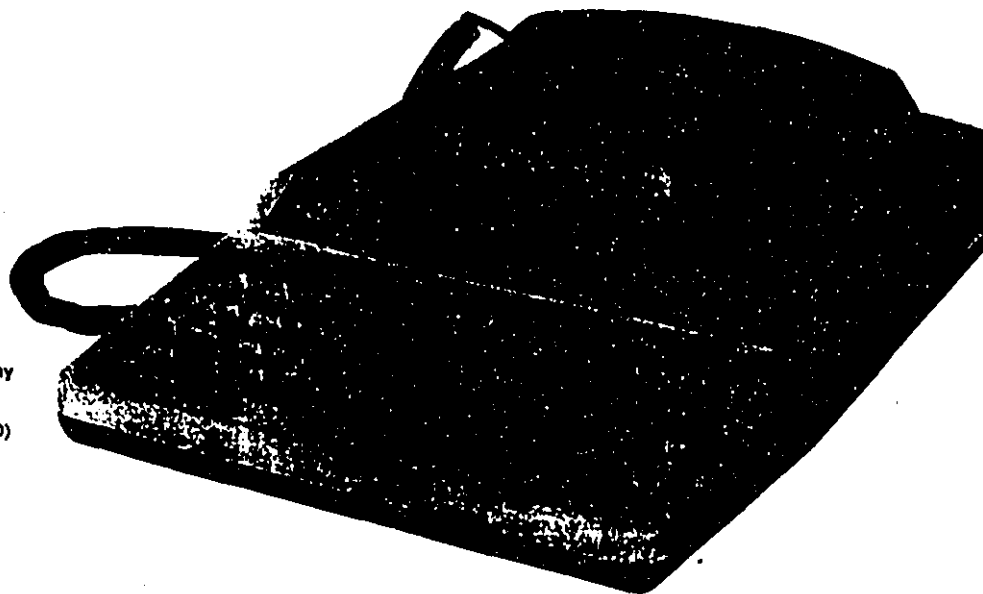
TeleView

The TeleView is so smart, it has a help
menu that has built-in each unit.
This is great feature for the TDD user who
may forget how to use the machine or can't
find the instruction book. Its all at your finger
tip.
The Teleview is easy to use, has a soft
touch keyboard, is completely portable, has
a large printer, and give you the most
powerful features that no other TDD/TTY/TT
has.
The TeleView has a multi-wide printing
feature that allows you to select three sizes
of characters to be print on paper.

To use the TeleView just turn the unit on
The unit is ready to use and HELP MENU
will show you how to set it up.
Step by step instruction will help you
understand how to use the TeleView.

TeleView Specifications:

Keyboard
49-Keys, 4-row computer keyboard style,
and 16 function keys.

Display
20 character Vacuum Florescent tube.
Character size: 0.25(high) x 0.125(wide)

Large Display for
Visual Impaired:(Optional)
20-character Vacuum Florescent tube
Character size: 0.375(high) x 0.25 (wide)

KENTUCKY POPULATION WITH
HEARING LOSS OR SPEECH IMPAIRMENTS
DEMOGRAPHIC INFORMATION

According to Vocational Rehabilitation study conducted by the University of Louisville in 1988, there are 371,680 Kentuckians who are deaf or hard of hearing.

The National Center for Health Statistics estimates that 8.8 percent of the population have hearing problems. 8.8% of Kentucky's population is 334,400.

National Information Center on Deafness at Gallaudet University estimates that 6.8% of the population is hard of hearing and 0.9% is deaf. Based on these figures Kentucky has an estimated 258,400 hard of hearing persons and 34,200 person who are deaf.

Kentucky Department of Education Child Count figures indicate that 25,859 children (Kindergarten through 12th grade) have speech or hearing difficulties.

During the past fiscal year Vocational Rehabilitation served 56 persons with a primary disability of Speech Impairment.

Statistics On Deafness And Hearing Disorders In The United States

*Compiled and researched by the
National Institute on Deafness and Other Communication Disorders,
National Institutes of Health
as reported in the April 1989 National Strategic Research Plan*

❑ More than 28 million Americans have a hearing loss; 80 percent of those affected have irreversible and permanent hearing damage.

❑ More than 1/3 of the U. S. population has a significant hearing impairment by age 65.

❑ Approximately 2 million people are profoundly deaf.

❑ One of every 1000 infants is born totally deaf.

❑ At least 1 million children are deaf or have a communication disorder.

❑ One of every 22 infants has hearing problems.

❑ Genetic factors are known to cause over 50 percent of all cases of severe childhood deafness.

❑ The average age of diagnosis of hearing loss is close to age 3.

❑ Sensorineural damage (damage to the hair cells and cochlea caused by genetics or exposure to noise) is the largest, single form of hearing loss affecting 17 million Americans.

❑ At least 15 percent of the U.S. population is affected by tinnitus. Persons over age 50 are twice as likely to have tinnitus.

❑ Otitis media (ear infection) is the most common cause of temporary hearing loss (predominantly in infants and young children with 70 percent having otitis media by the age of 3). Otitis media accounted for 10 million visits to doctors' offices in 1975.

❑ Presbycusis affects 1/3 of the U. S. population over age 65.

❑ Meniere's syndrome causes bilateral hearing loss in 5 to 20 percent of cases.

❑ The estimated cost of care per year for persons with hearing impairment is $56 billion (based on $2,000 per patient annual costs for special education, speech therapy, hearing aids, physician and specialist fees, and other expenses).

For More Information, contact:

National Association of the Deaf
Public Information Office • 814 Thayer Avenue • Silver Spring, MD • 20910-4500
(301) 587-1788 Voice • (301) 587-1789 TTY • (301) 587-1791 FAX

STROKE STATISTICS

Stroke killed an estimated 144,070 people in 1991 and is the third largest cause of death, ranking behind heart attack and all forms of cancer.

* Approximately 3,060,000 stroke survivors are alive today.

* Based on the Framingham Heart Study, approximately 500,000 people suffer a new or recurrent stroke each year.

* In 1990 females comprised 60.7 percent of stroke fatalities.

* Estimates are that stroke accounts for half of all patients hospitalized for acute neurological disease.

* Twenty-eight percent of annual stroke victims are under age 65.

* From 1981 to 1991 the death rate from stroke declined 30.5 percent.

* The 1990 death rates for stroke were 27.7 for white males and 56.1 for black males (102.5 percent higher); and 23.8 for white females and 42.8 for black females (79.8 percent higher).

* In 1950 the death rate from stroke was 88.8; in 1990, 28.1.

For more information, call the AHA's Stroke Connection at 1-800-553-6321.

For local information, refer the caller to:

If more detailed research is necessary, see:

Heart and Stroke Facts: 1994 Statistical Supplement, #55-0515

AHA publication(s) that should be sent to the caller:

Facts About Stroke, #51-1015; Fact Sheet on Heart Attack, Stroke and Risk Factors, #51-1066; Recovering From a Stroke, #50-076-A; How Stroke Affects Behavior, #50-1033; Caring for the Person with Aphasia, #50-1106; Stroke: A Guide for the Family, #50-1054; Six Hopeful Facts About Stroke, #51-1053 (Spanish version, #51-1037)

See also:

Cardiovascular Disease Statistics
High Blood Pressure
High Blood Pressure Statistics
Stroke
Stroke Clubs
Stroke Connection

Stroke Connection Publication
Stroke Effects
Stroke Rehabilitation
Stroke Risk Factors
Stroke Tests
Stroke Treatment

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INTRODUCTION

The National Center for Health Statistics (NCHS) estimated in 1987 that 8.8 percent of the population have some type of hearing problem. Based on this percentage using 1990 Census figures, Kentucky has approximately 324,300 persons with a hearing loss.

The National Information Center on Deafness (NICD) at Gallaudet University, the only liberal arts college for persons who are deaf or hard of hearing, estimated in 1980 that 6.8 percent of the population is hard of hearing and .9 percent is deaf. Using Kentucky population figures this translates into 250,600 persons who are hard of hearing and 33,168 persons who are deaf for a total of 283,768 persons. Additional data from NICD suggests that .19 percent of the deaf population or approximately 7,002 Kentuckians became deaf before the age of 19 (pre-vocational). This latter group may be more likely to use sign language to communicate.

KENTUCKY'S HEARING IMPAIRED POPULATION

1. National Center for Health Statistics*

   All hearing impaired - 324,306 (8.8%) (Deaf and Hard of Hearing)

2. National Information Center on Deafness - Gallaudet University*

   Hard of Hearing - 250,600 (6.8%)
   Deaf   -   33,168 (.9%)
   Total   - 283,768

   Pre-Vocational Deaf - 7002 (.19%) (Became deaf before age 19)

   *Based on KY 1990 Census - 3,685,296 Total Population

In 1988 the Kentucky Office of Vocational Rehabilitation conducted the "Kentucky Statewide Study of Persons with Disabilities". This study determined that 371,680 persons in Kentucky are limited in work, housework, play, school, or day to day living activities by hearing impairment. In this total, 73,010 persons indicated "a lot" of difficulties in these activities due to their hearing loss and an additional 298,670 reported "some" difficulties. (See table on page 9)

7

c. Between 30-54 dB loss, unaided[3] in the more useful ear with one of the following:

    (1) Speech discriminations[4] less than 50 percent <u>or</u>

    (2) A statement from a physician skilled in diseases of the ear, indicating progressive loss.

POPULATION ESTIMATES

In 1987, the National Center for Health Statistics (NCHS) estimated that almost 21 million persons or 8.8 percent of the population have hearing problems (Table 1). Their data show that dramatic differences exist in the prevalence rates by age groups (Figure 1): persons in their prime working years, 18-44 and 45-64 years of age, were over three and eight times, respectively, more likely to be hearing-impaired than persons under age 18. At the other extreme, persons 65 years and older were twice as likely to be hearing-impaired as persons between the ages of 45-64.

Table 1.   Estimates of the reported prevalence of hearing impairments in the population by age group, United States, 1987.

Age Group	Number	Rate Per Thousand
Total	20,994,000	88.0
Under 18 years	1,012,000	16.0
18-44 years	5,529,000	54.1
45-64 years	6,098,000	135.6
65 years and over	8,355,000	296.8
65-74 years	4,582,000	264.7
75 years and years	3,773,000	348.0

Source: National Center for Health Statistics, Data from the National Health Survey, Series 10, Number 166, Tables 57, 62, 1988.

Figure 1.   Estimates of the reported prevalence of hearing
impairments in the population by, age group,
United States, 1987.

Source: National Center for Health
Statistics, Data from Nat'l Survey,
Series 10, Number 166, Tables 57, 1988
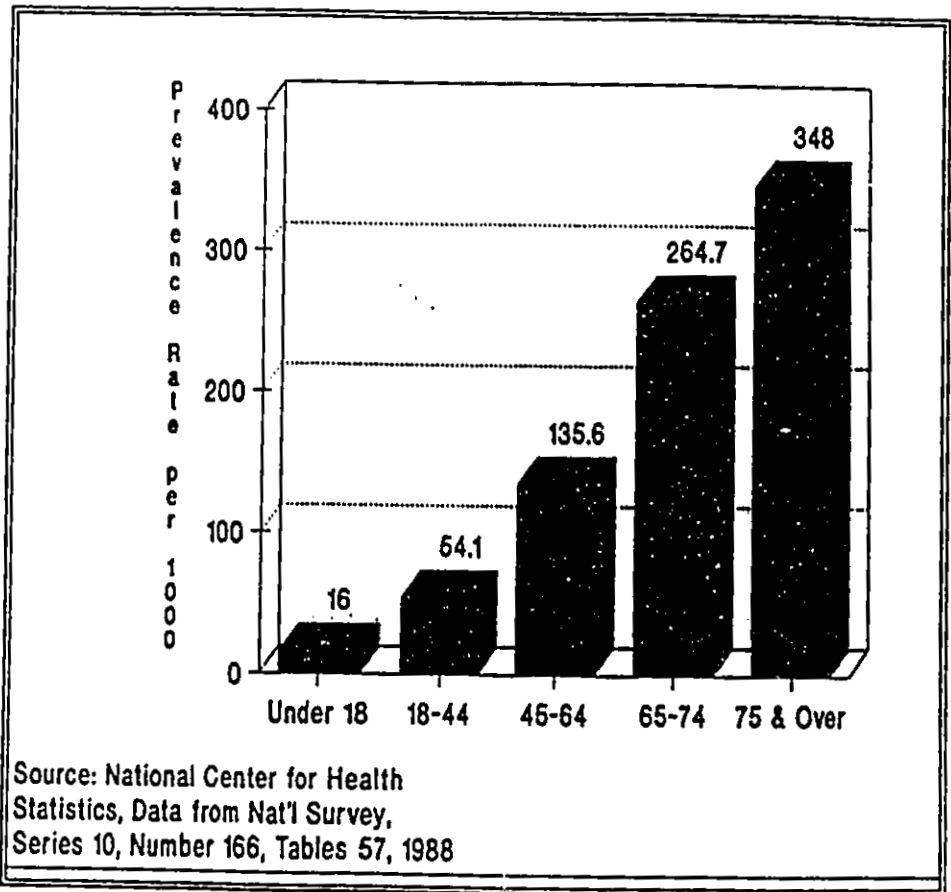
The prevalence of hearing impairment is greater for males than females and greate whites than blacks for all age groups (Table 2). These data were based on NCHS estim of the numbers of persons with any type of hearing problem. The survey methodology not permit for estimates by severity of the hearing loss to determine the numbe Americans who are deaf or hard-of-hearing.

Table 2.   Estimates of the reported prevalence of
            hearing impairments per 1,000 in the
            population, by age group and sex, by age
            group and race, United States, 1987.

Age Group	SEX		RACE	
	Male	Female	White	Black
Total	103.1	73.9	96.3	38.7
Under 45 years	47.5	31.6	43.4	18.7
45-64 years	184.3	91.1	144.1	72.0
65 years and over	346.1	261.9	308.2	162.0
65-74 years	331.8	211.3	274.7	141.2
75 years and over	373.7	333.2	361.2	197.7

Source: National Center for Health Statistics, Data from the National
        Health Survey, Series 10, Number 166, Tables 58, 59, 1988.

A related study by La Plante (1988), however, does provide estimates based on severity
of hearing impairment. He reports that there are an estimated 21,028,000 hearing-impaired
persons; with an estimated 1,741,000 deaf persons and 19,287,000 persons with other hearing
impairments among the non-institutionalized population (Table 3).

Table 3.   Estimated distribution of the hearing-
            impaired population by severity of
            hearing impairment and by age group,
            United States 1983-1985.

Age Group	Deaf	Hard-of-Hearing
Total	1,741,000	19,287,000
Under 45 years	318,000	5,988,000
45-69 years	667,000	8,272,000
70-84	551,000	4,302,000
85 + years	205,000	725,000

Source: La Plante, 1988, National Health Interview Survey for 1983 - 1985.

How much are you or others in your house limited in work, housework, play, school, or day to day living by deafness or hard of hearing?[a]

Area Development District	Birth Through 15 Years				16 Through 64 Years				Over 64 Years			
	Some		A Lot		Some		A Lot		Some		A Lot	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Barren River	1,180	2.4	170	0.3	7,350	4.7	1,620	1.0	7,710	25.0	3,280	10.6
Big Sandy	1,850	4.1	90	0.2	13,440	10.9	4,000	3.2	4,010	20.6	1,850	9.5
Bluegrass	2,470	2.0	440	0.4	20,440	5.2	4,760	1.2	20,040	29.2	2,370	3.4
Buffalo Trace	340	2.8	60	0.5	3,340	9.8	730	2.1	1,140	14.9	520	6.8
Cumberland Valley	2,640	4.5	570	1.0	13,880	9.1	2,100	1.4	8,310	30.9	2,500	9.3
FIVCO	740	2.3	440	1.4	7,040	7.6	1,630	1.8	3,940	22.8	1,100	6.4
Gateway	480	3.2	120	0.8	3,740	8.5	670	1.5	1,880	22.7	730	8.9
Green River	680	1.4	650	1.4	4,170	3.2	1,610	1.2	6,950	26.0	1,320	4.9
Kentuckiana[b]	2,880	1.7	500	0.3	38,580	7.1	4,760	0.9	21,990	19.0	3,230	2.8
Kentucky River	1,480	4.2	620	1.8	9,270	10.6	3,280	3.7	4,270	30.0	1,280	9.0
Lake Cumberland	1,050	2.7	580	1.5	9,040	7.6	2,050	1.7	3,740	14.6	2,600	10.1
Lincoln Trail	680	1.3	60	0.1	10,440	7.3	3,130	2.2	4,280	13.6	2,600	8.3
Northern Kentucky	1,190	1.5	60	0.1	14,270	7.0	2,440	1.2	11,260	29.0	4,990	12.9
Pennyrile	1,960	4.2	60	0.1	4,940	4.2	680	0.6	6,800	23.3	1,620	5.6
Purchase	1,150	3.1	70	0.2	6,510	5.7	2,040	1.8	5,100	17.0	2,990	10.0
STATE TOTAL	20,800	2.5	4,500	0.5	166,450	6.8	35,510	1.4	111,420	22.7	33,000	6.7

[a]Figures for nonresponse, missing data and answers indicating None are not shown.
[b]All data are for Kentucky counties in Kentuckiana; Indiana counties are not included.

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some -  298,670
a lot -   73,010

total   371,680
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Kentucky
Child Count

Count taken on December 1, 1993

Report of Children and Youth with Disabilities Receiving Special Education
Under Part B of the Individuals with Disabilities Education Act

Legend:			
MMD	Mild Mental Disability (formerly EMH)	OI	Orthopedic Impairment
FMD	Functional Mental Disability (formerly TMH & SPH)	OHI	Other Health Impairment
HI	Hearing Impairment	LD	Specific Learning Disability
S/L	Speech or Language Impairment	D/B	Deaf/Blind
VI	Visual Impairment	MD	Multiple Disabilities
EBD	Emotional Behavioral Disability	AUT	Autism
		TBI	Traumatic Brain Injury
		DD	Developmental Delay

NO.	DISTRICT	MMD	FMD	HI	S/L	VI	EBD	OI	OHI	LD	D/B	MD	AUT	TBI	DD	TOTAL
001	Adair Co	87	27	2	73	0	30	0	0	68	0	0	0	0	16	303
005	Allen Co	118	13	0	94	1	3	2	1	65	0	1	1	0	25	324
006	Anchorage Ind	1	0	1	20	0	0	2	13	19	0	0	0	0	2	58
011	Anderson Co	49	17	4	263	0	5	0	6	97	0	5	0	2	18	466
012	Ashland Ind	88	19	1	162	2	21	1	2	132	0	4	0	1	30	483
013	Augusta Ind	19	1	0	20	1	0	0	0	4	0	0	0	0	15	60
015	Ballard Co	36	2	0	37	0	3	0	2	55	0	6	1	0	128	270
016	Barbourville Ind	16	0	0	7	0	0	0	0	29	0	0	1	0	10	63
017	Bardstown Ind	40	19	0	41	2	4	2	0	42	0	2	2	0	23	177
021	Barren Co	111	8	0	97	5	11	2	4	109	0	17	0	0	43	407
025	Bath Co	52	21	0	102	1	2	0	1	90	0	0	0	0	31	300
026	Beechwood Ind	2	2	0	37	0	15	0	1	27	0	1	0	0	0	85
031	Bell Co	139	15	3	129	2	6	1	0	126	0	7	1	1	27	457
032	Bellvue Ind	15	4	0	34	0	4	1	0	43	0	0	0	0	35	136
034	Berea Ind	21	5	1	20	0	20	2	1	24	0	8	0	0	11	113
035	Boone Co	103	30	16	457	6	46	1	11	427	0	27	1	2	75	1202
041	Bourbon Co	77	8	2	98	1	32	0	2	157	0	8	0	0	14	399
042	Bowling Green Ind	78	16	4	81	0	29	0	5	76	0	4	1	0	41	335
045	Boyd Co	84	17	8	106	2	7	0	1	114	0	12	0	2	23	376
051	Boyle Co	52	21	2	154	1	18	0	19	98	0	2	1	2	58	428
055	Bracken Co	36	8	1	58	0	3	0	0	27	0	0	0	0	40	173
061	Breathitt Co	146	28	3	65	4	2	0	0	95	0	0	0	0	24	367
065	Breckinridge Co	81	3	4	149	3	13	5	5	103	0	4	0	1	8	359
071	Bullitt Co	127	39	9	387	4	51	18	1	462	0	11	2	0	29	1138
072	Burgin Ind	9	0	1	29	0	0	0	0	17	0	1	0	0	0	57
075	Butler Co	50	16	2	109	0	8	0	1	31	0	1	0	0	17	235
081	Caldwell Co	46	13	0	139	2	3	2	5	64	0	2	0	0	16	292
085	Calloway Co	50	16	1	178	5	17	3	16	148	0	8	4	1	45	492
091	Campbell Co	55	25	9	133	2	36	0	0	261	0	7	0	2	9	539
092	Campbellsville Ind	42	11	3	60	1	5	1	4	36	0	2	2	2	15	184
095	Carlisle Co	25	1	0	42	1	0	0	0	21	0	0	2	0	16	108
101	Carroll Co	44	8	3	65	0	4	0	4	64	0	0	0	1	4	197
105	Carter Co	173	31	1	251	1	10	0	1	193	0	0	0	1	15	677
111	Casey Co	94	15	0	132	0	14	0	1	88	0	4	0	0	31	379
113	Caverna Ind	36	5	0	20	0	2	0	0	52	0	0	0	0	22	137
115	Christian Co	300	38	11	313	3	37	0	1	342	0	24	1	0	21	1091
121	Clark Co	135	10	6	227	0	24	3	0	168	0	18	0	0	25	616
125	Clay Co	228	24	17	354	6	11	3	14	173	0	19	1	2	40	892
131	Clinton Co	80	3	0	51	0	1	0	0	24	0	0	0	1	7	167
132	Cloverport Ind	14	0	0	38	0	0	0	1	20	0	0	0	0	10	83
133	Corbin Ind	65	7	1	54	3	4	1	0	63	0	2	0	0	8	208
134	Covington Ind	197	40	2	306	6	55	7	1	187	0	34	0	2	13	850
135	Crittenden Co	38	8	0	98	1	3	0	1	92	0	4	0	0	2	247
141	Cumberland Co	52	5	0	71	0	2	1	0	45	0	0	0	0	9	185
143	Danville Ind	71	13	2	78	0	24	0	5	62	0	0	1	2	48	306
145	Daviess Co	142	35	7	378	8	71	10	21	373	0	45	0	1	3	1094

NO.	DISTRICT	MMD	FMD	HI	S/L	VI	EBD	OI	OHI	LD	D/B	MD	AUT	TBI	DD	TOTAL
146	Dawson Springs Ind	18	4	0	35	0	0	0	1	24	0	0	0	0	6	88
147	Dayton Ind	30	8	2	150	0	13	0	0	88	0	6	0	0	3	300
149	East Berstadt Ind	26	0	0	24	1	0	0	0	0	0	0	0	0	0	51
151	Edmonson Co	88	4	0	71	1	5	0	0	94	0	2	0	0	1	266
152	Elizabethtown Ind	33	10	2	89	2	5	3	5	54	0	7	1	1	9	201
155	Elliott Co	111	12	0	66	2	1	0	1	56	0	0	0	0	20	269
156	Eminence Ind	18	1	0	13	2	1	0	2	28	0	1	0	0	2	68
157	Erlanger Ind	33	1	2	88	3	26	0	3	136	0	20	0	1	1	314
161	Estill Co	203	18	2	130	0	4	4	0	62	0	0	0	0	60	483
162	Fairview Ind	15	3	0	31	0	1	0	0	31	1	2	0	0	7	91
165	Fayette Co	266	117	58	1082	18	654	28	28	1360	0	78	3	1	122	3815
171	Fleming Co	91	11	2	124	5	6	0	0	47	0	11	2	0	1	300
175	Floyd Co	324	54	13	194	7	8	3	0	144	0	9	0	0	3	759
176	Ft Thomas Ind	12	14	3	97	0	7	1	2	66	0	7	0	0	3	212
177	Frankfort Ind	28	5	1	36	1	7	0	3	45	0	0	0	0	9	135
181	Franklin Co	82	21	10	262	10	31	6	9	280	0	9	0	0	49	749
185	Fulton Co	23	10	0	39	1	1	0	5	17	0	1	0	1	6	104
186	Fulton Ind	38	0	0	33	2	1	1	0	15	0	3	0	0	1	94
191	Gallatin Co	19	4	1	33	0	1	0	0	33	0	5	0	0	4	100
195	Garrard Co	55	16	0	123	0	11	1	4	93	0	1	1	1	23	329
197	Glasgow Ind	56	10	0	32	1	7	2	6	65	0	6	0	1	2	188
201	Grant Co	53	5	5	157	1	4	1	0	169	0	6	0	0	8	409
205	Graves Co	66	15	1	218	0	10	6	3	121	0	5	2	1	28	476
211	Grayson Co	86	14	1	138	5	9	2	1	115	0	2	0	0	25	398
215	Green Co	63	7	0	39	0	2	0	0	18	1	0	1	1	0	130
221	Greenup Co	99	15	2	172	2	18	1	0	106	0	7	0	1	6	429
225	Hancock Co	29	3	2	80	0	10	0	0	25	0	6	1	0	2	168
231	Hardin Co	238	44	10	380	7	90	8	13	580	0	26	7	2	58	1483
235	Harlan Co	285	16	24	297	6	7	5	7	163	0	0	0	0	16	806
236	Harlan Ind	48	0	0	37	1	1	0	1	40	0	3	0	0	8	139
241	Harrison Co	109	11	11	144	0	9	0	3	142	0	4	0	0	5	438
242	Harrodsburg Ind	26	4	0	44	2	5	0	0	19	0	1	0	0	8	109
245	Hart Co	95	16	3	42	0	4	6	0	83	0	12	0	0	20	281
246	Hazard Ind	24	5	1	67	1	5	0	0	23	0	3	1	0	8	138
251	Henderson Co	154	12	4	289	3	18	4	8	311	1	16	7	0	14	841
255	Henry Co	43	5	1	58	0	2	2	3	61	0	4	1	1	2	183
261	Hickman Co	22	0	3	33	0	2	0	1	30	0	0	1	0	0	92
265	Hopkins Co	203	23	6	295	0	23	2	4	316	1	41	2	1	11	928
271	Jackson Co	81	15	2	98	3	8	4	2	114	0	1	0	0	27	355
272	Jackson Ind	19	1	0	13	1	3	0	0	14	0	0	1	0	0	52
275	Jefferson Co	551	500	117	4291	71	976	197	47	4529	0	331	27	8	633	12278
276	Jenkins Ind	33	9	0	37	2	2	0	0	45	0	0	0	1	0	129
281	Jessamine Co	67	15	14	191	3	37	4	8	206	0	10	0	1	21	577
285	Johnson Co	205	35	1	323	2	8	3	0	86	0	0	0	0	12	675
291	Kenton Co	81	38	5	333	7	72	16	23	471	0	83	0	0	66	1195
295	Knott Co	127	27	4	130	6	21	3	2	82	0	8	0	1	2	413

NO.	DISTRICT	MMD	FMD	HI	S/L	VI	EBD	OI	OHI	LD	D/B	MD	AUT	TBI	DD	TOTAL
485	Perry Co	218	25	9	172	8	50	4	2	173	0	12	1	0	45	719
491	Pike Co	470	67	7	163	24	10	0	10	258	0	16	2	0	0	1027
492	Pikeville Ind	31	4	0	14	1	6	0	3	7	0	0	0	0	1	67
493	Pineville Ind	25	1	0	14	0	0	0	0	13	0	1	1	0	2	57
495	Powell Co	109	14	2	111	5	8	0	7	61	0	1	0	2	30	350
496	Providence Ind	24	3	0	48	0	1	0	0	9	0	2	0	0	0	87
501	Pulaski Co	238	58	2	268	0	41	2	2	180	0	17	1	0	36	845
502	Raceland Ind	6	2	0	42	0	2	0	0	17	0	0	0	1	0	70
505	Robertson Co	9	0	0	23	0	0	0	0	7	0	3	0	0	0	42
511	Rockcastle Co	92	22	0	108	1	13	0	0	83	0	0	0	1	54	374
515	Rowan Co	120	16	3	154	3	23	0	0	128	0	4	4	0	31	486
521	Russell Co	102	24	0	84	0	9	0	1	77	0	0	0	0	0	297
522	Russell Ind	34	6	1	174	0	3	0	0	52	0	3	1	0	0	274
523	Russellville Ind	59	4	0	54	0	3	0	0	41	0	2	0	0	25	188
524	Science Hill Ind	5	0	0	22	0	0	0	0	3	0	0	0	0	1	31
525	Scott Co	117	25	8	184	4	23	1	7	219	0	1	0	1	42	632
531	Shelby Co	40	15	6	169	2	63	3	1	220	0	4	2	2	20	547
533	Silver Grove Ind	5	1	0	30	0	0	0	0	16	0	0	0	0	10	62
535	Simpson Co	66	7	1	152	2	17	1	3	94	0	1	0	2	8	354
536	Somerset Ind	49	22	0	41	1	6	0	1	57	0	0	0	0	16	193
537	Southgate Ind	1	1	1	20	0	0	0	0	13	0	1	0	0	0	37
541	Spencer Co	54	4	0	31	1	7	0	3	88	0	3	0	1	13	205
545	Taylor Co	52	20	0	40	2	6	3	0	68	0	2	0	0	89	282
551	Todd Co	62	4	0	67	0	5	1	1	74	1	8	0	0	86	309
555	Trigg Co	64	13	3	115	0	3	0	0	62	0	0	1	1	26	288
561	Trimble Co	23	5	1	63	0	2	0	4	36	0	1	0	0	1	136
565	Union Co	98	18	1	147	2	9	4	3	85	0	12	0	1	63	443
567	Walton-Verona Ind	10	2	1	49	0	2	0	1	25	0	3	0	0	4	97
571	Warren Co	140	58	4	280	6	55	9	7	269	0	10	2	2	14	856
575	Washington Co	56	9	0	87	0	6	0	0	56	0	0	0	1	58	273
581	Wayne Co	118	16	2	79	0	6	0	0	81	0	0	0	0	44	346
585	Webster Co	80	8	1	156	1	2	0	3	54	0	10	1	1	7	324
586	West Point Ind	3	0	0	21	0	2	0	4	10	0	2	0	0	2	44
591	Whitley Co	241	29	5	150	3	19	5	12	92	0	6	0	0	18	580
592	Williamsburg Ind	13	7	0	48	0	1	0	0	36	0	2	3	0	16	126
593	Williamstown Ind	22	2	0	9	0	3	0	0	15	0	0	0	0	1	52
595	Wolfe Co	103	18	0	21	1	5	0	1	49	0	0	1	1	36	236
601	Woodford Co	74	9	4	167	0	57	0	2	107	0	8	1	0	15	444
801	KSB	0	0	0	0	107	0	0	0	0	0	0	0	0	0	107
802	KSD	0	0	278	0	0	0	0	0	0	0	0	0	0	0	278
901	CHR-DHS	44	0	2	1	0	279	0	5	89	1	6	0	0	0	427
902	CHR-DSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	15,200	3,055	894	25,839	530	3,977	486	556	22,938	9	1,372	121	80	4,459	79,516

CABINET FOR WORKFORCE DEVELOPMENT
DEPARTMENT OF VOCATIONAL REHABILITATION
NUMBER OF CLIENTS SERVED (02-30) WITH SPEECH IMPAIRMENTS
FOR FISCAL YEAR 1994

CNTY	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
019	56	2.4	1	2.4
034	1	2.4	2	4.9
035	1	2.4	3	7.3
045	1	2.4	4	9.8
051	1	2.4	5	12.2
056	5	12.2	10	24.4
059	1	2.4	11	26.8
074	1	2.4	12	29.3
076	1	2.4	13	31.7
077	2	4.0	15	36.6
087	1	2.4	16	39.0
098	3	7.2	19	46.3
118	2	4.4	21	51.2
275	6	14.4	27	65.9
285	2	4.4	29	70.7
305	1	2.4	30	73.2
331	1	2.4	31	75.6
341	1	2.4	32	78.0
381	1	2.4	33	80.5
436	3	7.2	34	82.9
461	3	7.0	37	90.2
491	2	4.4	39	95.1
502	1	2.4	40	97.6
523	1	2.4	41	100.0

56 are also clients with speech Impairments, th
...nty of their residence has been identified.

Bob

DEVICES FOR DEAF AND HARD OF HEARING PEOPLE

Modern technology has made possible the development of a variety of visual and tactile devices for use by deaf and hard of hearing people in their daily lives. Because we can not keep up with the many distributors of devices, we have limited this list to devices manufacturers. We suggest that you contact the manufacturers directly for up-to-date information on models, prices, other available devices, and the names of the distributors nearest you. Inclusion on this list does not constitute endorsement of these products and exclusion does not imply disapproval.
Let us know of any devices and manufacturers we have missed.

This list is divided into four sections: General Devices; Alternative Listening Devices/Systems; Text Telephones; Manufacturers' Addresses.

I: GENERAL DEVICES

The following codes identify devices for each manufacturer:

A	Phone Amplifiers	E	Deaf-Blind Devices	Q	Stethescopes (amplified)
B	Burglar Alarms	F	Fire/Smoke Alarms	S	Phone Signalers
C	Baby Criers	I	Inter-office System	T	Telecaption Decoders
Da	Doorbell Signalers	M	AnsweringMachines	V	Bed Vibrators
Db	Door Knockers	P	Pagers	W	Wake Up Alarms

American Communications/
Eastern Electronics
C Da S

AT&T Accessible
Communications Product
Center
A S

Audex
A

Design Tech Internat., Inc.
W

Eye Festival, Inc.
W

F. O. B. Products Ltd.
W

Fourth Dimension
Instruments
Db

Global Assistive Devices
Da V W

Heidico, Inc.
A M S V W

Instant Replay, Inc.
T (VCR and Telecaption
Decoder in one machine)

Julian McDermott Corp.
B Da F S W

Life-Light, Inc.
F

MIRAC
M

National Captioning Institute
T

Nationwide Flashing Signal
Systems (NFSS)
V

Phone-TTY, Inc.
C Da P S V W

Quest Technologies
P

Silent Call Corporation
B C Da E F P S V W

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EXHIBIT   1

Sonic Alert, Inc.
B C Da E F P S V W

Starkey Labs, Inc.
Q

Teknova/(C. Gustavo Farell-Cesar-Scott, Inc.)
T

Telautograph Corporation
Omnifax/Omninote
I

Telecommunication Network, Inc. (TNI)
P

Telephone Extension Corp.
A S

Ultratec, Inc.
Da P S W

USA, Corp.
B P S

Wheelock, Inc.
B F P S

Williams Sound Corp.
A

II: ALTERNATIVE LISTENING DEVICES/ SYSTEMS

As indicated in each listing, the technology of the systems may be infrared, FM, AM, or a loop. Some are hardwired. The systems may be used by individuals or groups.

Codes: G = Group;
        P = Personal

Audex
(Infrared) G P

Audiological Engineering Corp.
FM, Infrared, Loop modules

Comtek
(FM) G P

Conference-Mate Systems
(Infrared) G P

Earmark, Inc.
(FM) P

LPB, Inc.
(AM, FM) G P

Metavox, Inc.
(Stereo; Hardwire) G P

Nady Systems, Inc.
(Infrared) P

One-to-One Communications
(Hardwire) G P
(Speech amplifier)

Oticon Corp.
(Loop) G P

Oval Window Audio
(Loop) G P

Phonic Ear, Inc.
(FM) Auditory Trainers

Sennheiser Electronic Corp.
(Infrared) G P

Siemens Hearing Instruments, Inc.
(FM, Infrared) G P

Telex Communications, Inc.
(FM) G P

Unex Corp.
(Infrared) G P

Williams Sound Corp.
(FM) G P

III: TEXT TELEPHONES

TTY, TT, TDD are common acronyms for text telephones, devices used by deaf and hard of hearing people for typing phone conversations. The acronyms are interchangeable.

This section lists only manufacturers of text telephones. Among the features in different models are built-in answering machines. All manufacturers listed, with the exception of American Communications, make at least one model that is ASCII compatible. Software, modems, and other text communication devices are available for telecommunications among deaf and hearing people. For a comprehensive list of such devices, write to NICD and ask for a copy of "A Resource List of Telecommunications Equipment and Software Sources."

AT&T Accessible Communications Product Center

American Communications/ Eastern Electronics

Ameriphone

Compu-TTY, Inc.
(Also trading as Trident Technologies

Philips Home Services International

KRI Communications, Inc.

Positron

Telecom International
TeleSensory
(Braille TTY)

Trident Technologies
(See Compu-TTY, Inc.)

Ultratec, Inc.

ZiCom Technologies, Inc.

IV: MANUFACTURERS' ADDRESSES

V = Voice telephone
T = Text telephone
BBS = Bulletin Board Service

American Communications/
Eastern Electronics
180 Roberts Street
East Hartford, CT 06108
(203) 289-3491 V/T
(203) 289-7639 Fax

Ameriphone
7231 Garden Grove Blvd.
Suite E-F
Garden Grove, CA 92641
800-874-3005 V/T
800-772-2889 T
714-897-0808 V/T
714-897-4703 Fax

AT&T Accessible
Communications Product
Center
5 Woodhollow Road
Room 1119
Parsippany, NJ 07054
(800) 233-1222 V/T
(201) 581-3972 Fax

Audex
713 North 4th Street
Longview, Texas 75601
214-758-9392 V
800-237-0716 V (U.S.)
800-237-4976 V (Canada)
903-753-9546 Fax

Audiological Engineering
Corporation
35 Medford Street
Somerville, MA 02143
(617) 623-5562 V
(800) 283-4601 V
(800) 955-7204 T
(617) 666-5228 Fax

Compu-TTY, Inc.
(Also trading as Trident
Technologies)
3309 Winthrop, Suite 85
Fort Worth, TX 76116
(800) 366-9950 V/T
(817) 738-2485 V/T
(817) 738-8993 T
(817) 738-1970 Fax

Comtek
357 West 2700 South
Salt Lake City, UT 84115
(801) 466-3463 V
(801) 484-6906 Fax

Conference-Mate Systems
466 Kinderkamack Road
Oradell, NY 07649
(201) 967-5500 V
(201) 967-9078 Fax

Design Tech Internat., Inc.
7401 Fullerton Road
Springfield, VA 22153
(703) 866-2000 V
(703) 866-2001 Fax

Earmark, Inc.
1125 Dixwell Avenue
Hamden, CT 06514
(203) 777-2130 V
(203) 777-2886 Fax

Eye Festival, Inc.
6917-B Woodley Ave.
Van Nuys, CA 91406
(818) 902-0648 V
(818) 902-9833 T
(818) 902-0244 Fax
(818) 902-9840 BBS

F.O.B. Products Ltd.
c/o J. Friedman
Base Resource, Inc.
181 South Riverside Avenue
Suite 126
Croton-on-Hudson, NY 10520
(914) 739-5602 V/T
(914) 739-5653 V/T

Fourth Dimension
Instruments
P.O. Box 376
Spring, TX 77383
(713) 288-9366 V
(713) 288-6210 Fax

Global Assistive Devices
4950 N. Dixie Hwy #121
Ft. Lauderdale, FL 33334
(305) 565-6332 V
(305) 563-9770 Fax

Heidico, Inc.
561 Keystone Avenue
Suite 296
Reno, NV 89503
(702) 324-7104 V/T/Fax

Instant Replay, Inc.
2790 Northwest 79th Ave.
Miami, FL 33133
(305) 854-8777 V/T
(305) 858-9053 Fax

Julian McDermott Corp.
1639 Stephen Street
Ridgewood, NY 11385
(800) 842-5708 V
(718) 456-3606 V
(718) 381-0229 Fax

KRI Communications, Inc.
3303 Harbor Boulevard, D-7
Costa Mesa, CA 92626
800-833-4968 V/T
(Outside CA only)
(714) 540-7777 V/T
(714) 540-7747 Fax

Life-Light, Inc.
810 Monroe Avenue
Asbury Park, NJ 07712
(800) 545-4470 V

LPB, Inc.
28 Bacton Hill Road
Frazer, PA 19355
(215) 644-1123 V
(215) 644-8651 Fax

Metavox, Inc.
8375 Leesburg Pike
Suite 421
Vienna, VA 22182
(703) 698-0802 V
(703) 876-0325 Fax

MIRAC
545 Route 62
Winchester, OH 45697
(513) 442-2401 V/T

Nady Systems, Inc.
6701 Bay Street
Emmeryville, CA 94608
(510) 652-2411 V
(510) 652-5075 Fax

National Captioning Institute
5203 Leesburg Pike
15th Floor
Falls Church, VA 22041
(703) 998-2400 V/T
(703) 998-2458 Fax

Nationwide Flashing Signal
Systems (NFSS)
8120 Fenton Street
Silver Spring, MD 20910
(301) 589 6671 V
(301) 589-6670 T
(301) 589-5153 Fax

One-to-One Communications
1714 Penrose
Olathe, KS 66062
(913) 764-4072 V

Oticon Corp.
29 School House Road
P.O. Box 6724
Somerset, NJ 08875-9972
(800) 526-3921 V
(908) 560-1220 V
(908) 560-0029 FAX

Oval Window Audio
33 Wildflower Court
Nederland, CO 80466
(303) 447-3607 V/T/Fax

Philips Home Services
International
60 East 8th Street
New York, NY 10003
(212) 780-0848 V/T
(212) 505-1716 Fax

Phone-TTY, Inc.
202 Lexington Avenue
Hackensack, NJ 07601
(201) 489-7889 V
(201) 489-7890 T
(201) 489-7891 Fax
(201) 489-3323 BBS

Phonic Ear, Inc.
3880 Cypress Drive
Petaluma, CA 94954-7600
(707) 769-1110 V
(707) 769-9624 Fax
(800) 227-0735 V U.S.
(800) 387-3158 V Canada

Positron
5101 Buchan Street
Montreal, Quebec H4P 2R9
CANADA
(800) 361-9698 V
(800) 661-4911 T
(514) 345-2200 V
(514) 731-8662 Fax

Quest Technologies
510 Worthington Street
Oconomowoc, WI 53066
(800) 245-0779 V/T
(414) 567-9157 V/T
(414) 567-4047 Fax

Sennheiser Electronic Corp.
#6 Vista Drive
P.O. Box 987
Old Lyme, CT 06371
(203) 434-9190 V
(203) 434-1759 Fax

Siemens Hearing
Instruments, Inc.
10 Constitution Avenue
Piscataway, NJ 08855
(800) 766-4500 V
(908) 562-6600 V
(908) 562-6696 Fax

Silent Call Corporation
P.O. Box 868
Clarkston, MI 48347-0868
(800) 572-5227 V
(313) 673-0221 V
(313) 673-6069 T
(313) 391-2098 Fax

Sonic Alert, Inc.
1750 West Hamlin
Rochester, MI 48309
(313) 656-3110 V/T
(313) 656-8347 Fax

Starkey Labs, Inc.
6700 Washington Ave. S.
Eden Prairie, MN 55344
(800) 328-8602 V
(612) 941-6401 V
(612) 828-9262 Fax

Teknova/C. Gustavo Farell-
Cesar-Scott, Inc.
Building B, Suite 253
4171 North Mesa
El Paso, TX 79902
(800) 880-3212 V
(915) 543-3212 V
(915) 543-3213 Fax

Telautograph Corporation
Omnifax/Omninote
8700 Bellanca Avenue
Los Angeles, CA 90045
(800) 848-1987 V
(800) 221-8330 V
(310) 760-8578 Fax

Telecom International
383 Beach Road
Burlingame, CA 94010
(415) 343-3000 V/T
(415) 343-4314 Fax

Telecommunication Network,
Inc. (TNI)
3088 State Highway 27
Kendall Park, NJ 08824
(908) 821-1122 V
(908) 821-5577 Fax

Telephone Extension Corp.
83 East Central Avenue
Pearl River, NY 10965
(800) 431-1120 V
(914) 735-7877 V
(914) 735-1000 Fax

TeleSensory
455 N. Bernardo Avenue
P. O. Box 7455
Mountain View, CA 94309
(800) 227-8418 V
(415) 960-0920 V
(415) 960-9064 Fax

Telex Communications, Inc.
9600 Aldrich Avenue, S.
Minneapolis, MN 55420
(800) 328-8212 V
(612) 884-7430 V
(612) 884-0043 Fax

Trident Technologies
(See Compu-TTY, Inc.)

Ultratec, Inc.
450 Science Drive
Madison, WI 53771
(800) 482-2424 V ??
(608) 238-5400 V/T
(608) 238-3008 Fax

Unex Corp.
27 Industrial Avenue
Chelmsford, MA 01824
(800) 345-8639 V
(508) 256-8222 V
(508) 250-9055 Fax

USA, Corp.
13222 B Admiral Avenue
Marina Del Rey, CA 90292
(213) 397-4217 V
(213) 821-7403 Fax

Wheelock, Inc.
273 Branchport Avenue
Long Branch, NJ 07740
(800) 631-2148 V
(908) 222-6880 V
(908) 222-8707 Fax

Williams Sound Corp.
10399 West 70th Street
Eden Prairie, MN 55344
(800) 328-6190 V/T
(612) 943-2252 V/T
(612) 943-2174 Fax

ZiCom Technologies, Inc.
2485-A Coral Street
Vista, CA 92083
(800) 748-5633 V/T
(619) 727-7110 V/T

DEVICES FOR THE DEAF AND RELATED INFORMATION

NAME: John S. Calveard, Jr.   Krown and Ultratec Products
      3820 Leland Road   (502) 896-6213 (TDD)
      Louisville, KY   40207   (502) 895-2970 (V)

NAME: The Cincinnati Speech &   (513) 221-0527
        Hearing Center   (513) 221-3300 (TDD)
      3021 Vernon Place
      Cincinnati, OH 45219

NAME: James T. Hester   All TDDs
      1104 Hustonville Road   (606) 236-5625 (TDD)
      Danville, KY   40422

NAME: MIRAC   Factory Authorized repair
      Ralph Captain, Manager   center for Krown and
      545 Route 62   Ultratec. Repairs all
      Winchester, OH   45697   devices for the deaf.
      (513) 442-2401 (V/TDD)   Electronics for special
      (513) 442-2403 (Fax)   needs.

NAME: Dick Rosenberger   National Distributor & Sales
      Deaf Communications of   for Krown & Ultratec
        Cincinnati   products. All computer modem &
      550 Palmerston Drive   printers. Light signals,Tele-
      Cincinnati, OH   45238-5317   caption. V/TDD telephone
      (513) 451-3722 (V/TDD)   answering machines. Rental &
      (513) 451-8810 FAX   Lease programs. Public
      (800) 775-3323   telephone/pay telephone TDD's.
      (ORDERS ONLY) (V/TDD/FAX)   Smoke & Fire alarms for home &
                                        business. ADA compliance
                                        equipment.

NAME: Tom Ryan   Sales of Krown & Ultratec
      1707 Richmond Drive   products. TDDs,modems,printer,
      Louisville, KY 40205   light signal,clocks,Tele-
      (502) 451-4708 (TDD)   caption.

NAME: Lois Straus   Krown and Ultratec
      1104 Falconwood Rd.   products. Assistive Devices,
      Louisville, KY   40222   Modems, Clocks, etc.
      (502) 425-4783 (TDD)   or   (800) 648-6057

A variety of other devices and products to assist the deaf and
hearing impaired are available from manufacturers across the
nation. These products include, but are not limited to, TDDs,
closed caption decoders, flashing light alert systems, wake-up
bed vibrators, hearing ear dogs, sign language books   and
videotapes, FM listening systems, and telephone amplifiers.   For
a complete list of these manufacturers and their products,
contact KCDHI, or write or call: Kentucky Assistive
Technology Service   (KATS)   Network, 427   Versailles   Road,
Frankfort, KY 40601; (800) 327-5287 or (502) 564-4665.

TDD VENDORS LISTING 3/15/94

AMERIPHONE
7231 GARDEN GROVE BLVD STE E
GARDEN GROVE, CA 92641-4219
714/897-0808 V
714/897-1111 TTY

AT&T
2001 RT 46
PARSIPPANY, NJ 07054
201/299-7020 V
201/283-3232 TDD

COMPU-TTY INC
3309 WINTHROP STE 85
FORT WORTH, TX 76116
817/738-2485 V
817/738-8993 TDD

EASTERN ELECTRONICS
180 ROBERTS STREET
EAST HARTFORD, CT 06108
203/528-9821 V/TDD

GTE TELEPHONE OPERATIONS
318 E MAIN
LEXINGTON, KY 40507
606/255-0200 V

HARC MERCANTILE LTD
3130 PORTAGE STREET   P O 3055
KALAMAZOO, MI 49003-3055
1-800-445-9968 V
616/381-2219 TDD

HARRIS COMMUNICATIONS
6541 CITY WEST PARKWAY
EDEN PRAIRIE, MN 55344-3248
1-800-825-6758 V
1-800-825-9187 TDD

HITEC GROUP INTERNATIONAL   INC
P O BOX 187
WESTMONT, IL 60559
1-800-288-8303 V/TTY
708/963-5588 V/TTY

NFSS   INC
8120 FENTON ST
SILVER SPRING, MD 20910
301/589-6671 V
301/589-6670 TDD

PHONE-TTY
202 LEXINGTON AVENUE
HACKENSACK, NJ 07601
201/489-7889 V
201/489-7890 TDD

POTOMAC TECHNOLOGY   INC
ONE CHURCH STREET   STE 402
ROCKVILLE, MD 20850
1-800-433-2838 V/TDD
301/762-4005 V

SOUND IMPROVEMENT
2192 STRINGTOWN ROAD
GROVE CITY, OH 43123
614/875-5100 V/TDD
1-800-426-7343 V/TDD

SOUTH CENTRAL BELL
600 N 19TH ST   18TH FLOOR
BIRMINGHAM, AL 35203

THE DEAFWORKS CO
1106 S STATE ST   STE 17
PROVO, UT 84606-6347
801/374-2504 V
801/375-3560 TDD

TTY OF CAROLINA   INC
308-D SHERWEE DRIVE
RALEIGH, NC 27603
919/779-0481 V/TDD

ULTRATEC
450 SCIENCE DRIVE
MADISON, WI   53711
1-800-482-2424 V/TTY
608/238-5400 V/TTY